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### AUSTIN'S WATER AND LIGHTING PLANTS

Turbidity Removed by Filter Gallery—Pumps Furnish Direct Pressure—Street Lighting by Towers—Lignite as Fuel—Economy from Recent Improvements

EDITORIAL CORRESPONDENCE

AUSTIN, Texas, owes much of its attractiveness to the circumstance of its being the capital city. The State Capitol, the University and the insane asylum all are surrounded with beautiful grounds and add much to its adornment. A modern City Hall costing \$40,000 has just been completed also. The city owns its water works and electric light plant; but does not own the sewerage system, although the proposition of purchasing this is now under consideration. Twenty years ago the city built a dam across the Colorado River, which was one of the largest in the world, and which was used to furnish power for operating the street railways and street lighting plant, and also small power plants throughout the

city. This was carried away by a flood about fifteen years ago, and there are many who now favor rebuilding it. It is estimated that a new dam would cost about \$400,000. An additional argument in favor of this is the lake which would be formed thereby and which, while the first dam stood, was wonderfully popular for boating and other park purposes. It is probable that, if carried out, the project will be financed by the Water and Light Commission, which is in a sense independent of the city government.

The water supply of Austin is obtained from the Colorado River, which is at all times very turbid. Instead of building an expensive filtration plant for removing the turbidity, however, the city has utilized the sand and gravel which lie in the valley adjacent to the river. In this has been dug a filter gallery 500 feet long and running obliquely with the course of the river, the nearest end being 65 feet therefrom. The top of the timber flume in this trench is eight feet wide and the bottom nine feet, and the sides and top are made of plank, and the whole is completely covered with sand and gravel so that in case the river should overflow, the filtering effect would still continue. At each end of the filter gallery is a well, the further one being used as a suction well. Provision is made for taking water directly from the river should it become necessary. This construction has been effective in completely clarifying the river water at all times and has developed a capacity of about six million gallons per day. As the consumption is about three million gallons, this will apparently give an ample factor of safety. The cost of this construction was about \$10,000.



WATER WORKS, FILTER, TRENCH AND WELL

The pumping plant has a power equipment of two 250-horsepower Heine boilers installed a year ago; one Gaskill duplex compound pump and one Holly quadruplex pump. An eight million gallon cross-compound Corliss engine, Nordberg pump, is now under construction. These furnish water under direct pressure, which is maintained at about 100 pounds.

All the services, to the number of 3,900, are metered. The meter rates are \$.33 1-3 per 1,000 gallons for the first 18,000, \$.25 for the next 36,000, \$.20 for the next 100,000, \$.16 for the next 50,000 and \$.09 for all over this. A minimum charge is made of \$1.50 for 4,500 gallons. The state has a contract at \$.06 per 1,000 gallons straight. The Water and Light Commission receive nothing from the city for fire protection or supplying school or other public buildings. The water costs about \$.02 delivered to the mains, and the department shows an annual profit of about \$75,000.

The electric light plant, which also is operated by the Water and Light Commission, furnishes lights for the streets and public buildings without charge and shows an annual profit of from \$30,000 to \$35,000. The cost



ELECTRIC LIGHT TOWER

of generating electricity is about 1.6 cents per K.W.H. at the switch-board. A flat rate of 10 cents is charged for light, and a sliding scale with a minimum of 3 cents for power purposes. The city is lighted by means of thirty 70-foot towers, each of which carries six arc lights. These are lit on moonlight schedule. Many of the streets are so heavily shaded that light from these towers does not penetrate to them and there is much criticism of the system on this account. To such criticism the reply is made that no other city of equal size is lighted as cheaply as Austin. (The same reply would serve if there were no lights whatever.) The lighting plant has three 150-horsepower Heine boilers, one 400-horsepower Heine boiler and one 500-horsepower Altman-Taylor boiler. One 750-horsepower cross-compound Corliss engine is connected by rope drive to a line shaft which drives one 200-K.W. and two 250-K.W. belted General Electric generators. There is also one 450-K.W. Reynolds tandem-compound Corliss engine direct-connected to a 300-K.W. General Electric generator. A direct-connected turbine generator is about to be installed. All the engines run condensing, surface condensers being employed using water from the river. Austin oil separators are used on the exhaust line and the condensed water is further freed from oil by the use of Keystone filters. Texas lignite is used for fuel, which gives about 7,500 B.T.U. on a wet basis and costs about



MOUNTED POLICE LEADING FIREMEN'S PARADE

\$1.35 per ton. To burn this a special grate is used having 50 per cent. air space and the fire is spread very thin. The ashes are disposed of in a way not possible in many localities, being thrown into a 24-inch open channel passing under the forward end of the ash pit, through which channel flows the condensing water which, with the ashes carried in suspension, is discharged directly into the river.

The Water and Light Commission comprises four men elected by the people, whose term of office is two years and who serve without pay. The plants are under the direct charge of a superintendent, which position R. C. Brooks occupies. The combined plants show an annual gross profit of about \$100,000, and repairs, rebuilding and extensions are paid from this. Improvements made during the past two years have so decreased the running expenses, the fuel bills having been reduced from \$46,000 to less than \$20,000 per year, that the profit has increased 25 per cent. The electric light plant is being paid for by the city at the rate of \$22,500 a year, which about offsets the services rendered in lighting the streets and furnishing water for public purposes, which is estimated to be worth about \$23,000 per year; which charge of \$23,000 is not included in the estimated profits. The water and lighting plants are located adjacent to each other, but are operated independently and the records of the two are kept entirely separate.

#### Snow Fall Gauges

THE Chief of the United States Weather Bureau calls attention to the fact that devices for measuring snow fall which are at present available are by no means satisfactory and suggests that the attention of employees of the Reclamation Service be directed towards improving the present methods. Water works engineers, and especially those whose storage reservoirs are fed directly from relatively small drainage areas, are likewise interested in this subject, and the Weather Bureau would undoubtedly be grateful for any suggestion from them toward this end. Attention is called to the fact that the ordinary tube surmounted by a receiver is defective because the wind carries the snow past the orifice and thus

prevents the recording of the true amount of snow fall. All forms of obstacles set up local currents, which also seriously affect the records. When snow is collected and remains for some weeks without measurement, an uncertain amount is lost through evaporation. If sleety snow falls on an open-mouthed receptacle this is soon clogged and may remain unserviceable for a considerable time. These and other difficulties should be carefully considered in devising apparatus for this purpose.

#### Lighting Values of Street Lamps

THE Committee on Street Lighting Specifications, appointed by the National Electric Light Association, presented, with their final report of May 22, a working plan for arriving at the relative lighting values of street lamps. About 15,000 observations were made on different street arc lamps, at a uniform distance of 250 feet, to determine their relative lighting values. Both the luminometer and street photometer were used, and their results checked fairly well, although the latter was found the more satisfactory and was used in the final investigation. Measurements were made of forty-two 6.6-ampere, direct-current, series arc lamps; sixty-five 4-ampere, direct-current, series, magnetite luminous arc lamps, and fifty 9.6-ampere, direct-current, series, open arc lamps. The committee endeavored to standardize street lights of these various kinds in terms of a 16-candlepower incandescent lamp, this value being represented by X in the report of the committee. Thus a lamp having the X value of 4 would give the same illumination as would be obtained from a standard 16-c.p. at one-fourth of the distance; or, to have the same illumination midway between the lamps, four times as many lamps would be required. Also, the relative c.p. of the different lamps is as the square of the X value; that is, if one wished to know how many 16-c.p. incandescent lamps would be required on poles spaced the same distance as the arc lamps of the X value of 4, the answer would be 16. The various lamps were classified as to their X values, as follows:

- $X = 5\frac{1}{2}$ .
- 4.0 ampere, direct current, series, luminous arc.
- $X = 4$ .
- 9.6 ampere, direct current, series, open arc.  
6.6 ampere, direct current, series, enclosed arc.  
7.5 ampere, alternating current, series, enclosed arc.
- $X = 3\frac{1}{2}$ .
- 6.6 ampere, direct current, series, open arc.  
5.0 ampere, direct current, series, enclosed arc.  
6.6 ampere, alternating current, series, enclosed arc.
- $X = 3$ .
- 5.5 ampere, alternating current, series, enclosed arc.

These relative classifications do not claim to give exact values for all lamps. For instance, the 6.6-ampere, direct-current, series, open arc lamps gave values of from 3 to 5, as determined by the various observations. The 5.0 ampere, direct-current, series, enclosed arc lamps were found to have values ranging from between  $3\frac{3}{4}$  and  $4\frac{3}{4}$ , and similar variations were found in the others. These relative values can, therefore, be considered as merely approximate, but as expressing, in the judgment of the committee, a near approximation to a fair average value of the lamps found in the service.

The table indicates that a 7.5-ampere, alternating-current, series, enclosed arc lamp has one-third more lighting capacity than a 5.5-ampere lamp of the same kind. Also, that a 9.6-ampere open arc is equivalent to a 6.6-ampere enclosed arc, both direct-current lamps.

#### WATER RATES STATISTICS

Difficulty in Harmonizing Schedules—Varying Conditions Make General Uniformity Impossible—Rates of Municipal Plants Often Too Low—Data from 375 Cities

A PAPER was read before the American Water Works Association, at their last convention, by Dow R. Gwynn giving information collected by him about a year ago concerning the water rates paid in 375 cities of the United States. These cities include all but three of the 160 having a population of more than 25,000 in 1900, the others being smaller than this. In asking for this information Mr. Gwynn stated, "We appreciate the difficulty of harmonizing the different methods of charging for water, and if you do not charge on room or person basis, kindly approximate the rates so that we can make a general comparison. As a basis for comparison of rates for family or domestic use, we have selected a house containing six rooms and occupied by five persons or less. By family or domestic use we mean the use of water for general kitchen use, water being drawn from a faucet in the kitchen or hydrant in the yard."

He found, as have others, that the average printed rate sheet is not always clear to one not familiar with it. The most popular method of paying rates for domestic use is the "room" plan. Next in popularity is the "person's" plan, and next the "first faucet" plan. Some cities have a rate for domestic use which includes bath, closet and basin without additional charge. The average charge in 134 cities supplied by private companies for a six-room house, bath, closet, basin and sprinkling a 50-foot front is approximately \$21.00. The average rate in 149 cities supplied by companies for domestic use in a six-room house was found to be \$6.83.

In the table, cities which furnish water through meters only have the letter M before their names. Those which filter the water are preceded by the letter F. Discussing the question of what is a fair rate, Mr. Gwynn said, "It would be impossible to fix a universal standard rate for water which would be fair both to the consumer and water purveyor in all cities, owing to the great differences in local conditions. Gravity supplies that are pure enough without filtration, in reasonably close proximity to the municipality, represent the ideal condition. On the other side, there are cities where the supply is taken from muddy rivers and the water is in such a condition as to make it necessary to have large sedimentation basins in connection with filters. In most cases where river water is filtered it is necessary to pump water twice and the writer knows of a case where part of the supply is pumped three times."



Under such conditions, considering the cost of coagulants and extra fuel, it would be legitimate to charge a higher rate than in the first case. Artesian water also must frequently be pumped twice and the first pumping must generally be done with low-efficiency pumps. There are two fallacies in the statement that water should be "free as air." Muddy water in the river where it flows

should be and is; anyone can go to the river bank with a bucket and draw it. But filtered water is a manufactured commodity, and delivering it cannot be done without cost, any more than can delivering coal or kerosene. Unfortunately, as Mr. Gwynn points out, in the case of municipalities and even of a number of water companies, neither the correct cost of manufacturing nor

## WATER RATES CHARGED IN CITIES DURING 1907

## WATER FURNISHED BY PRIVATE COMPANIES

Pop. U. S. Cen- sus 1900	CITY (Private Plants)	Dom. Use 6 Rooms or 5 Persons or 1st Faucet	Bath, Hot and Cold	Water Closet	Basin	Sprinkling 50 Ft. x 150 Ft. Lot and Street	Total	Schedule Meter Rates	
								Highest	Lowest
9,654	Adrian, Mich.							\$	\$
14,509	Ann Arbor, Mich.	3.00	3.00	3.50		5.00	14.50	.20	.08
2,116	Albany, Ind.	5.00	5.00	5.00	5.00	5.00	25.00	.40	.20
14,210	Alton, Ill.					13.00	.25	.06	
13,074	Ashland, Wis.	9.00	5.00	4.00			30.00	.30	.08
9,695	Anniston, Ala.	10.00				5.00	23.00	.20	.20
42,728	Akron, Ohio	5.63	2.50	2.50			16.00	.066	
23,201	Burlington, Ia.	6.00	5.00	4.00		11.63	.25	.10	
38,415	Birmingham, Al.	11.00	5.00	4.00		15.00	.30	.05	
7,500	Bucyrus, O.	5.00	4.00	5.00		6.00	20.00	.25	.08
7,524	Brainerd, Minn.	9.00	5.00	5.00		5.00	24.00		
70,996	Bridgeton, Conn	8.50	3.00	4.00		4.00	16.00	.20	.04
10,436	Beloit, Wis.	6.00	4.00	4.00	2.00	6.00	18.00	.35	.08
6,268	Bristol, Conn.	8.00	3.00	3.00		4.00	16.00	.30	.05
30,470	Butte, Mont.	18.00	6.00			12.00	36.00	.50	.20
17,484	Belleville, Ill.	6.00	5.00	4.00	4.00	10.00	29.00	.30	.30
11,269	Baton R.ge, La.	9.00	5.00	3.50		15.00	32.50	.50	.15
5,957	Boise, Idaho	10.80	4.32	3.78			.25	.18	
22,698	Clinton, Iowa.	6.00	5.00	3.00		6.00	20.00	.30	.10
33,988	Chester, Pa.	6.00	5.00	2.00			.30	.08	
30,154	Chat'n'ga, Tenn.	7.50	6.00	6.00		7.50	27.00	.25	.08
55,807	Charleston, S.C.	10.00	4.00	2.00	2.00	5.00	23.00	.25	.045
12,566	Cairo, Ill.	6.00	5.00	5.00	2.50	5.00	23.50	.30	.10
9,416	Carthage, Mo.	8.00	2.00	2.00		7.00	19.00	.25	.15
17,614	Columbus, Ga.						.20	.10	
7,160	Connellsv., Pa.						.27	.04	
7,752	Creston, Ia.	8.00	5.00	2.50	1.00	5.00	20.00	.35	.125
12,316	Columbia, Pa.	8.00	4.00	4.00		4.00	20.00	.10	
6,905	Chillicothe, Mo.	6.00	4.00	3.00		5.00	18.00	.50	.20
5,061	Clinton, Mo.	8.00	3.00	2.00		7.00	20.00	.50	.20
11,099	Charl's n. W. Va	7.00	5.00	5.00		5.00	22.00	.50	.10
25,802	Council Bl. Ia.	7.75	3.50	2.50		5.00	18.75	.35	.08
9,014	Cortland, N. Y.	6.00	3.00	4.00	2.00	5.00	20.00	.40	.06
35,354	Davenport, Ia.	6.00	3.50	4.50		4.50	18.50	.30	.08
16,354	Danville, Ill.	5.00	2.50	2.50	.50	6.50	17.00	.25	.10
62,139	Des Moines, Ia.	4.00	3.00	3.00		7.50	17.50	.30	.10
133,859	Denver, Col.	5.90	4.00	4.00		11.00	24.90	.17	.10
3,763	Dennison, O.	5.00	3.50	5.00	1.00	5.00	19.50	.35	.06
6,679	Durham, N. C.	6.00					.25	.187	
7,579	Defiance, O.	6.00	5.00	3.00	1.00	5.00	20.00	.40	.05
25,238	Easton, Pa.	7.00	3.00	4.00	1.00	3.00	18.00	.266	.08
7,327	Eureka, Cal.	15.00					.50	.15	
12,800	Elwood, Ind.	6.00	5.00	5.00	2.00	6.00	24.00	.25	.07
35,672	Elmira, N. Y.	6.00	4.00	4.00	2.00	3.00	19.00	.50	.10
29,655	E. St. Louis, Ill.	6.00	5.00	5.00		7.50	23.50	.30	.15
12,138	E. Provid., R. I.	5.00				6.00	.30	.06	
4,922	Exeter, N. H.	6.00	4.00	4.00	2.00	6.00	22.00	.25	.16
17,517	Eau Claire, Wis.	6.80	4.00	4.00	2.00	5.00	21.80	.30	.10
3,774	Effingham, Ill.	6.00	5.00	5.00		7.50	23.50	.50	.20
15,184	Elkhart, Ind.	5.00	4.00	4.00		5.00	16.00	.30	.10
13,258	Freeport, Ill.	6.98	3.15	2.25		4.50	16.88	.35	.10
9,278	Ft. Madison, Ia.	8.00	5.00	4.60	3.00	5.00	25.60	.40	.08
12,172	Greenwich, Ct.	8.80	5.50	5.50			.293	.161	
3,661	Greencastle, Ind.	6.00	5.00	5.00	2.00	5.00	23.00	.30	.10
4,282	Gadsden, Ala.	6.00	6.00	6.00		5.00	23.00	.45	.17
18,684	Green Bay, Wis.	6.00	4.00	4.00	2.00	6.00	22.00	.40	.20
7,655	Gardiner, Me.	7.00	5.00	5.00	3.00	5.00	25.00	.333	.106
11,800	Greenville, S. C.						.40	.10	
11,923	Hunt'g'n, W. Va	5.00	5.00	5.00	1.00	5.00	21.00	.40	.10
7,280	Hopkinsv., Ky.	6.00	3.00	5.00	5.00	10.50	29.50	.30	.10
10,770	Hagerstown, Md						.30	.05	
10,770	Helena, Mont.	12.00	4.00	4.00	3.00	7.50	30.50	.40	.20
59,364	Hoboken, N. J.	10.65	2.70	1.80		2.70	17.85	.18	.113
7,987	Iowa City, Ia.	5.00	3.00	3.00		3.00	14.00	.40	.08
9,705	Iron Wd., Mich.	8.00	5.00	7.00		5.00	25.00	.40	.08
169,164	Indianap's, Ind.	5.00	3.00	3.00		7.00	18.00	.18	.045
9,242	Iron Mtn., Mich.	5.50	4.00	4.00	2.00	5.00	20.50	.30	.08
26,023	Joplin, Mo.	5.40	1.80	1.80		8.45	17.45	.225	.0425
35,930	Johnstown, Pa.	9.75	3.00	3.00	1.00	5.00	21.75	.40	.05
32,637	Knoxv., Tenn.	8.00	5.00	5.00			.25	.07	
51,418	Kansas C., Kan.	6.00	4.00	4.50		5.10	18.60	.25	.09
14,641	Keokuk, Ia.	5.00	4.00	3.00		6.00	19.00	.40	.09
13,595	Kankakee, Ill.	4.50	2.50	2.50	2.00	5.00	18.00	.35	.15
10,609	Kokomo, Ind.	4.90	2.80	2.80	2.10	5.25	17.85	.25	.08
38,307	Little Rock, Ark	6.00	3.50	4.00		8.00	21.50	.30	.05
5,131	Louisiana, Mo.	7.00	3.00	3.50	2.00	7.00	22.50	.35	.125
3,800	Little Falls, N. J.	10.00					.40	.30	
8,872	Long Br'ch, N. J.	8.00	4.00	4.00		5.00	21.00	.30	.15
8,962	Lincoln, Ill.	5.75	4.00	3.00	2.00	6.50	21.25	.40	.08
26,369	Lexington, Ky.	5.00	5.00	5.00	1.00	3.00	19.00	.25	.10
20,735	L'wen'th, Kan	9.00	5.00	5.00		12.00	31.00	.50	.20
2,737	Lamar, Mo.	7.00	2.00	2.00	2.00	6.00	19.00	.25	.10
20,942	Muncie, Ind.	4.00	2.50	2.50	1.80	5.00	15.80	.20	.05
23,272	Macon City, Ga.	6.00	5.00	5.00	3.00	5.00	23.00	.30	.06
16,165	Marionette, Wis.	6.00	3.00	2.50	7.50	19.00	.30	.15	
2,300	Monesson, Pa.	11.00	3.00	3.00	5.00	5.00	22.00	.30	.08
4,219	Milledgev., Ga.	7.50	4.00	4.00	9.00	24.50	.25	.15	
5,240	Mt. Vernon, Ind.	5.50	3.50	3.00	5.00	17.00	.40	.09	
1,895	Morg'nt'n, W. V.	6.00	4.00	4.00	4.00	5.00	20.00	.30	.10
5,099	Mexico, Mo.	6.00	4.00	3.00	5.00	17.00	.50	.20	
11,376	Milford, Mass.	6.00	4.00	5.00	2.00	6.00	23.00	.40	.146
11,786	Manitowoc, Wis.	5.00	4.00	4.00	1.00	5.00	19.00	.30	.10
8,012	Moberly, Mo.	5.00	4.00	3.00	7.50	19.50	.50	.10	
23,898	Nashua, N. H.	6.00	2.00	4.00	4.00	16.00	.20	.05	
28,339	New Castle, Pa.	7.00	3.50	3.00	2.00	2.50	18.00	.22	.08
108,027	New Haven, Ct.	5.00	3.00	3.00	.50	4.00	15.50	.18	.10
22,265	Norristown, Pa.	7.00	3.00	3.00	.50	4.00	17.50	.266	.066
18,157	Newark, O.	6.75	3.50	1.50	7.00	18.75	.20	.15	
5,706	Norwich, N. Y.	6.00	4.00	3.00	2.00	3.00	18.00	.15	.10
22,034	Newport, R. I.	7.00	5.00	5.00	10.00	27.00	.40	.25	
20,028	New Alb'y, Ind.	4.75	2.85	1.90	5.70	15.20	.135	.045	
287,104	New Or'ns, La.	8.00	3.50	5.00	2.00	8.50	27.00	.25	.075
3,424	New Hartf'd, Ct.	5.00	3.00	2.00	2.00	5.00	17.00		
60,960	Oakland, Cal.	6.00	2.00	4.00	5.00	17.00	.396	.312	
28,284	Oshkosh, Wis.	6.00	2.00	4.00	5.00	17.00	.40	.08	
7,174	Oneonta, N. Y.	6.00	5.00	5.00	5.00	18.00	.50	.20	
9,212	Oskaloosa, Ia.	6.00	3.00	3.00	1.00	4.00	17.00	.40	.05
5,646	Oconto, Wis.	5.00	4.00	5.00	5.00	19.00	.50	.20	
10,313	Ogden, Utah	6.50	1.00	1.50	27.25	36.25	.20	.06	
102,555	Omaha, Neb.	6.75	3.50	2.50	1.00	5.00	18.75	.35	.10
13,189	Owensboro, Ky.	6.50	3.50	4.00	2.00	3.75	17.75	.245	.049
19,446	Paducah, Ky.	5.76	3.55	3.30	.70	5.50	18.81	.25	.06
27,777	Passaic, N. J.	12.00	2.00	2.00	8.00	20.00	.30	.10	
105,171	Paterson, N. J.	12.00	2.00	4.00	8.00	26.00	.30	.10	
4,266	Pontiac, Ill.	6.50	4.00	5.00	3.00	8.26	26.50	.25	.125
2,529	Parsons, Kan.	8.00	2.00	3.00	10.00	23.00	.30	.10	
11,496	Pine Bluff, Ark.	5.00	5.00	5.00	3.00	7.50	25.50	.40	.10
4,904	Plattsm'th, Neb.	6.00	4.00	2.50	2.00	5.00	19.50	.35	.15
50,100	Peoria, Ill.	6.00	3.00	3.00	1.50	6.00	19.50	.20	.06



## WATER RATES CHARGED IN CITIES DURING 1907—Continued

WATER FURNISHED BY PUBLICLY-OWNED PLANTS

Pop. U. S. Cen- sus 1900	CITY (Municipal Plants)	Dom. Use 6 Rooms or 5 Persons or 1st Faucet	Bath, Hot and Cold	Water Closet	Basin	Sprinkling 50 Ft. x 150 Ft. Lot and Street	Total	Schedule Meter Rates		Pop. U. S. Cen- sus 1900	CITY (Municipal Plants)	Dom. Use 6 Rooms or 5 Persons or 1st Faucet	Bath, Hot and Cold	Water Closet	Basin	Sprinkling 50 Ft. x 150 Ft. Lot and Street	Total	Schedules Meter Rates	
								Highest	Lowest									Highest	Lowest
6,813	Andover, Mass.	6.00						.30	.07	204,731	Louisville, Ky.	4.80	4.00	2.40	.80	6.00	18.00	.12	.048
30,345	Auburn, N. Y.	5.40	2.70	2.70	.90	3.60	15.30	.33	.048	16,485	Lansing, Mich.	4.00	2.50	2.50		2.00	11.00	.10	.05
11,335	Attleboro, Mass.							.306	.126	28,895	La Crosse, Wis.	5.00	2.00	3.00		5.00	15.00	.20	.08
38,973	Altoona, Pa.	4.80	3.00	2.00	.50		10.30	.33	.04	102,479	Los Angeles, Cal.	8.93	1.575	1.575		4.725	16.80	.093	.093
129,896	Allegheny, Pa.	16.75	3.00	1.00	1.50	2.50	24.75	.10	.10	18,116	Lafayette, Ind.	5.75	3.50	2.50		6.00	17.75	.15	.06
24,147	Aurora, Ill.							.47	.066	40,169	Lincoln, Neb.							.15	.15
27,838	Atl'tic Cy., N. J.	6.25	2.75	2.00	1.75	3.00	15.75	.12		94,969	Lowell, Mass.	6.00	3.00	4.00	1.00	3.00	17.00	.19	
14,695	Asheville, N. C.	10.00	4.00	4.00	4.00	5.00	27.00	.25	.08	68,513	Lynn, Mass.	5.00	3.00	3.00	1.00	4.00	16.00	.20	.175
9,473	Amesbury, Mass.	7.00	5.00	5.00		6.00	23.00	.50	.20	12,392	Leom'ster, Mass.	5.00	2.00	4.00	2.00	5.00	19.00	.266	.02
8,603	Arlington, Mass.	6.00	4.00	5.00		4.00	19.00	.20	.133	31,723	Lima, O.	6.00	3.50	2.50		7.00	19.00	.20	.08
35,416	Allentown, Pa.	3.75	1.25	2.00		2.00	9.00	.15	.04	16,028	Lorain, O.	8.00	3.00	3.00				.20	.07
8,381	Astoria, Ore.	9.00	6.00	6.00		6.75	27.75	1.00	.03	62,559	Lawrence, Mass.	5.00	3.00	4.00		3.75	15.75	.05	.08
20,929	Amst'dam, N. Y.	4.50	1.90	1.50		1.90	9.80	.214	.042	41,459	Lancaster, Pa.	6.00	3.00	3.00		2.00	14.00		
10,245	Athens, Ga.							.40	.12	38,409	Mobile, Ala.	7.50	2.75			4.00	14.25	.15	.032
39,441	Augusta, Ga.	5.00	3.00	1.00	1.00	2.00	12.00	.10	.04	34,227	McKeesport, Pa.	5.00	4.00	4.00	2.50	4.00	19.50	.20	.066
7,061	Athol, Mass.	10.00	4.00	4.00		5.00	23.00	.25	.05	20,818	Muskegon, Mich.	5.00	2.00	1.00		5.00	13.00	.062	.062
94,151	Albany, N. Y.	10.50				5.00	15.50	.08	.08	33,664	Malden, Mass.	6.00	3.00	3.00	2.00			.253	.08
89,872	Atlanta, Ga.							.10	.07	17,337	Marion, Ind.	4.00	2.00	2.50		4.00	12.50	.15	.06
20,178	Anderson, Ind.	4.00	2.50		2.50	5.50	14.50	.15	.05	18,244	Medford, Mass.	4.00	2.00	3.00		4.00	13.00	.266	.04
4,148	Asbury Pk., N. J.							.20	.20	56,987	Manchester, N. H.	4.50	2.00	2.50	.75	5.00	14.75	.166	.106
4,000	At. Hight, N. J.							.266		285,315	Milwaukee, Wis.	6.00	3.00	2.00	1.00	2.50	14.50	.06	.06
560,892	Boston, Mass.	8.00	5.00			5.00	18.00	.186	.106	102,320	Memphis, Tenn.	6.00	5.00	5.00		10.00	26.00	.28	.10
40,063	Brockton, Mass.	5.00	4.00	4.00	1.50			.266	.133	262,718	Minneapolis, Minn.	1.80	2.00	2.50	.50	3.00	9.80	.08	.08
352,387	Buffalo, N. Y.	5.75	1.00	1.50		2.00	10.25	.06	.02	14,260	Manistee, Mich.	4.90	2.70	2.70	1.35	5.40	17.05		
6,460	Bloom'g'n, Ind.	5.00	3.00	4.00		10.00	22.00	.35	.10	14,073	Muscatine, Ia.	6.00	3.00	3.00	1.00	8.00	21.00	.40	.10
32,722	Bayonne, N. J.							.266	.133	11,544	Marshalltown, Ia.	3.92	2.38	2.38				.32	.06
508,957	Baltimore, Md.						8.00	.20	.06	6,576	Mt. Clem's Mich.	4.00	2.00	2.50		3.00	11.50	.15	.06
4,686	Big Rpd's, Mich.	4.00	2.00	2.00		4.00	12.00	.25	.08	14,522	Middletown, N. Y.	4.50	1.50	1.50		2.50	10.00	.15	.026
3,036	Barnsville, Ga.	12.00						.15	.10	14,896	Meridian, Miss.	6.00	5.00	5.00	1.00	5.00	22.00	.40	.08
18,503	Battle Cr., Mich.	4.00	2.00	3.00		4.00	14.00	.13	.06	17,248	Moline, Ill.	6.00	2.00	2.00			10.00	.15	.06
4,110	Bordent' n, N. J.							.30	.15	13,348	Marietta, O.	5.50	3.00	2.00		6.00	16.50	.35	.12
27,628	Bay City, Mich.	5.00	2.00	2.00	1.00	4.00	14.00	.10	.05	3,437,202	New York City						12.00	.133	.133
39,647	Bingh' p'n, N. Y.	3.00	3.00	3.00	1.00	3.00	13.00	.12	.06	20,006	N. Br'sw'k, N. J.	8.00	4.00	5.00	1.00	5.00	23.00	.133	.121
21,850	Bangor, Me.	5.00	3.00	3.00	1.00	5.00	17.00	.073	.073	24,200	N. Adams, Mass.	6.00	3.00	3.00		3.00	15.00	.15	.10
30,667	Canton, O.						7.20	.06	.06	62,442	N. Bedford, Mass.	2.50	2.50	2.50	1.25	2.50	11.25	.15	.05
1,698,575	Chicago, Ill.							.07	.07	33,587	Newton, Mass.	6.00						.35	.045
13,667	Clinton, Mass.							.333	.086	24,943	Newburgh, N. Y.	7.00	.50	.50		1.00	9.00	.10	.03
23,910	Cohoes, N. Y.	5.00	2.00	3.00		3.00	13.00	.08	.08	25,998	N. Briton, Conn.	4.50	2.70	2.70	.45	2.70	13.50	.10	.04
81,886	Camb'ge, Mass.	4.00	4.00	3.00	2.00	5.00	18.00	.20	.10	14,478	Newburypt., Mass.	6.00	4.00	4.00	2.00	5.00	21.00	.30	.14
325,902	Cincinnati, O.	4.30	2.50	1.50	.90	10.00	19.20	.10	.10	246,070	Newark, N. J.	6.25	5.00	2.50		5.00	18.75	.15	.09
381,768	Cleveland, O.	4.50	2.00	2.00			8.50	.053	.053	28,306	Newport, Ky.	6.00	6.00	3.00	2.00	3.00	20.00	.15	.10
42,938	Covington, Ky.							.186		17,251	Norwich, Conn.	5.00	3.00	3.00		3.50	14.50	.40	.053
13,000	Corning, N. Y.	8.00	2.00	2.00	2.00	2.00	16.00	.36	.09	17,548	N. London, Ct.	4.50	2.00	2.00		7.50	16.00	.16	.06
125,560	Columbus, O.	5.00	5.00	4.00		5.00	19.00	.08	.08	46,624	Norfolk, Va.	5.60	2.40	2.40		4.80	15.20	.09	.09
34,072	Chelsea, Mass.	6.00		5.00		5.00	16.00	.186	.106	80,865	Nashville, Tenn.	9.00	4.00	5.00		2.31	20.31	.20	.08
75,935	Camden, N. J.	5.00	3.00	2.00	1.00	5.00	16.00	.10	.055	22,199	Oswego, N. Y.	4.00	2.00	3.00	.50	4.00	13.50	.25	.04
4,792	Concord, Mass.	6.00	4.00	5.00	2.00	5.00	22.00	.266	.10	90,426	Portland, Ore.	6.00	3.00	3.00		6.00	18.00	.166	.157
2,918	Clinton, Ind.	5.40	3.00	3.00		5.00	16.40	.30	.15	321,616	Pittsburg, Pa.	5.25	1.00	3.00		5.00	14.25	.18	.06
6,216	Coldwater, Mich.	4.00	1.05	1.25	1.00		7.30			28,157	Pueblo, Col.	18.00	6.00	6.00			30.00	.25	.05
19,167	Chicopee, Mass.	4.50	3.00	2.50				.23	.066	3,351	Perry, Okl.							.40	.08
9,431	Clarksv., Tenn.	6.00	6.00	5.00	6.00	4.00	27.00			8,463	Peru, Ind.	5.00	2.00	2.00		4.00	13.00	.20	.05
18,091	Charlotte, N. C.							.25	.07	175,597	Providence, R. I.	6.00	5.00	5.00	2.00	5.00	23.00	.20	
25,656	Cedar Rapids, Ia.	6.50	3.00	3.00		5.00	17.50	.25	.08	1,293,697	Philadelph., Pa.	5.00	3.00	1.00	1.00	3.00	13.00	.04	.04
12,000	Cheyenne, Wyo.	6.00	5.00	5.00		5.00	21.00	.60	.287	38,231	Pawtucket, R. I.							.30	.06
42,638	Dallas, Tex.	8.00	6.00	4.00		2.50	20.50	.30	.10	21,810	Petersburg, Va.							.20	.07
85,333	Dayton, O.	4.00	2.00	2.50	2.00	5.00	15.50	.08	.06	24,029	P'ghk'psie, N. Y.	3.50	1.50	2.00	.75	5.00	12.75	.17	.04
285,704	Detroit, Mich.	2.60	1.00	1.60	.48	.80	6.48	.058	.022	19,158	Pt. Huron, Mich.	4.50	2.00	2.00	1.00	5.00	14.50	.10	.02
36,297	Dubuque, Ia.	6.00	3.00	3.00	2.00	5.00	19.00	.40	.08	23,899	Quincy, Mass.	6.00	4.00	4.00	2.00	5.00	21.00	.30	.125
52,969	Duluth, Minn.	6.00	2.																

### WATER RATES DURING 1907—Continued

PUBLICLY-OWNED PLANTS

Pop. U. S. Cen- sus 1900	CITY (Municipal Plants)	Dom. Use 6 Rooms or 5 Persons or 1st Faucet	Bath, Hot and Cold	Water Closet	Basin	Sprinkling 50 Ft. x 150 Ft. Lot and Street	Total	Schedule Meter Rates	
								Highest	Lowest
8,804	Webster, Mass.	\$ 5.00	3.00	4.00	.....	5.00	17.00	.30	.15
9,706	Watert'n., Mass.	6.00	.....	.....	.....	.....	.....	.33	.13
23,481	Waltham, Mass.	5.00	2.00	.....	1.00	6.00	17.00	.30	.10
45,859	Waterbury, Ct.	2.00	2.00	3.00	.....	3.00	13.00	.30	.05
38,878	Wh'ling, W. Va.	2.50	1.25	3.00	.....	6.00	21.75	.15	.15
118,421	Worcester, Mass.	6.00	5.00	4.00	.....	2.38	17.38	.25	.10
20,686	Waco, Tex.	7.00	5.00	3.00	.....	.....	.....	.40	.15
76,508	Wilmington, Del.	5.00	3.00	2.00	1.00	5.00	16.00	.10	.046
28,204	Woon'sk't., R. I.	6.00	.....	.....	.....	.....	.....	.30	.10
21,690	Watert'n., N. Y.	4.00	1.00	2.00	.....	5.00	12.00	.20	.03
278,718	Wash'gton, D.C.	4.80	.....	.....	.....	.....	.....	.04	.04
7,378	Ypsilanti, Mich.	3.00	2.00	2.50	2.00	3.00	12.50	.25	.08
47,931	Yonkers, N. Y.	10.00	.....	.....	.....	.....	.....	.20	.....
44,885	Youngstown, O.	4.75	2.38	2.38	.....	3.50	13.07	.18	.072
23,538	Zanesville, O.	5.30	1.00	3.00	2.50	3.00	14.80	.06	.06

"M"—All Service Pipes Metered. "F"—Filtered Water.

### ANNUAL AND METER RATES

AVERAGES OF THOSE CHARGED IN 375 CITIES

	Private- Owned Plants	Public- Owned Plants	Both Private and Public
Domestic use in 6-room house or 5 persons or 1st faucet.....	\$ 6.83	\$ 6.04	\$ 6.40
Additional for 1 bath, hot water connections.....	3.88	2.99	3.40
Additional for 1 self-closing water closed.....	3.69	3.12	3.38
Additional for 1 basin, hot water connection.....	\$14.40	\$12.15	\$13.18
Additional for sprinkling 50' x 140' lot, including sidewalk and street in front.....	1.94	1.55	1.74
Total charge per annum for all the above privileges.....	\$16.34	\$13.70	\$14.92
SCHEDULE METER RATES			
Highest per 1,000 gallons.....	\$0.318	\$0.218	\$0.262
Lowest per 1,000 gallons.....	.108	.079	.092
Number of reports from cities with private-owned plants.....	162		
Number of reports from cities with public-owned plants.....	213		
Total number of reports received.....	375		
(Several plants have been purchased by the municipality since the information was received.)			
Average population of cities (1900) with private-owned plants.....	25,437		
Average population of cities (1900) with public-owned plants.....	85,382		
Average population of cities (1900), all cities reporting.....	59,577		

that of delivering is known. Every citizen may be considered as a stockholder in the municipal corporation who is paying for his stock by annual installments. He is entitled to receive consideration as such and not to have the business of the corporation operated at a loss. The consumers of the commodity furnished by his corporation should pay to the corporation at least the cost of that commodity; and this cost should include depreciation and general expenses as well as operating expenses. "In the writer's opinion," said Mr. Gwynn, "if the actual cost of water furnished by municipalities was known, there would be a general advance in the rates charged. The writer believes that a consumer who uses water in small quantities in a city where the water is filtered or must be pumped twice should pay at least 40 cents per thousand gallons. There are cities where the rate should be higher. The service rendered to a householder supplied with filtered or artesian water through a meter should be worth at least \$1.00 per month. This is only 3 1-3 cents per day. 'The readiness to serve' charge in connection with meters should be at least \$1.00 per

month or \$12.00 per annum, net.... The rate for a bath tub with or without hot water connections should be about 50 per cent. of the domestic rate. The water closet rate, say 70 per cent. of the domestic rate, the stationary wash basin rate, 15 per cent. and the sprinkling rate should be, at least, equal to the domestic rate. In some localities, particularly where it is extremely difficult to get water or where freight rates on pipe and machinery are so excessive as to materially increase the investment in the plant, a basing rate of \$6.00 is not high enough."

Cities where it is necessary to pump direct and to furnish fire pressure whenever called for, should have a higher basing rate than cities where fire pressure is not required. Assuming that \$6.00 is a fair rate for domestic use in a six-room house, water not filtered and pumped only once, and that filtering or second pumping is worth 25 per cent. increase, the above assumption would give costs as follows:

	Ordinary Conditions	Double Pumping or Filtration
Domestic use 6 rooms.....	\$ 6.00 + 25 per cent.....	\$ 7.50
Bath, with or without hot water..	3.00 + " " " .....	3.75
Water Closet (self-closing).....	4.20 + " " " .....	5.25
Wash Basin.....	.90 + " " " .....	1.13
	\$14.10	\$17.63
Sprinkling 50' lot in connection with above uses.....	6.00 + " " " .....	7.50
	\$20.10	\$25.13
METER RATES		
Minimum monthly rate.....	.80 + 25 per cent.....	\$ 1.00
Sliding Scale		
Highest meter rate, per 1,000 gallons net.....	.32 + " " " .....	.40
Lowest meter rate, per 1,000 gallons net.....	.08 + " " " .....	.10
Special rate where consumption is 3,000,000 gallons or more per month .....	.065 + " " " .....	.081

### WARD REPRESENTATION

The Editor, MUNICIPAL JOURNAL AND ENGINEER,  
Flatiron Building, New York:

The reference to the system of "election at large" in Mr. Ernest S. Bradford's article on the Galveston plan of city government (MUNICIPAL JOURNAL, June 3, p. 694) carries with it an implied condemnation of the ward system, on which some comment may not be out of place.

This is especially so, as it has become the fashion to use the alleged inherent evils of ward representation as an argument in favor of applying the commission plan to American cities generally, regardless of their size and other characteristics. It appears to be forgotten that election by wards is a cardinal feature of city government in Great Britain, and that its adoption in that country has not been attended by the abuses which have made the term "ward boss" an epithet of deserved reproach on this side of the Atlantic. On the contrary, the ability of a city ward to select as its representative any qualified city voter, whether resident in that particular ward or not, results in the election of minority representatives—frequently among the best—who would stand no chance whatever under election at large.

The system alluded to by your contributor, under which complaints by aggrieved or damaged citizens are made to the ward representative, instead of to the proper city department, is not an essential of the ward system, but an excrescence which has been carefully cultivated and fostered by the "political" element. In England a citizen having occasion to lodge a complaint would no more think of doing so with his ward councillor than he would select, for the same purpose, a resident shareholder of a gas company as the proper recipient of a representation in regard to defective lighting service.

It is possible that there are causes operating in America, such as the relative paucity of public-spirited citizens willing to devote their time and ability to unpaid public service, which may render success under English methods doubtful or impossible. But if that be so, all interests would be best served by facing the position thus established in preference to hiding behind subterfuges of which the above is merely an instance.

Medford, Mass., June 5, 1908.

JOHN S. HODGSON.



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## CHANGE OF ADDRESS

To insure the accuracy of our mailing lists, subscribers are requested to notify us of any change of address, giving both the old and new addresses.

It is further requested that our Subscription Department be notified if copies are not received promptly.

Readers are invited to contribute to the MUNICIPAL JOURNAL AND ENGINEER, either in the form of special articles or of letters discussing matters of current interest.

It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

## REMOVAL NOTICE

The office of the Municipal Journal and Engineer on July 1 will be removed to the Thirty-ninth Street Building, 239 West Thirty-ninth street, New York City.

JUNE 17, 1908.

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## Technical Societies and Conventions

Most of the technical and semi-technical societies hold conventions during the summer months, and this would seem therefore to be an appropriate time for consideration, by those municipal officials eligible to membership, of the advantages which such societies can offer.

A reply sometimes made to an invitation to join a technical society is, that the technical periodicals furnish all the information which such a society could give, and the papers presented at its meetings can be obtained later by anyone. This is perfectly true, but it is not a pertinent argument. The technical paper and technical

society each has its field, and neither can take the place of the other.

The society's functions may be classified under four heads: Giving information to members; inspiring members by personal intercourse; giving them wider acquaintance among those of the same profession or official position; contributing to the general good by co-operation and investigations. The first of these is shared with periodicals. But it is the general experience of all who attend conventions where any serious work is done, that the discussions of papers are ordinarily of more interest than the papers themselves, as in these are expressed the opinions and experiences of a number of men, acquired under various conditions. Moreover, opportunity is offered for private discussions in which opinions can be learned which would otherwise be unobtainable. The second function arises from those indefinable inspirations occasioned by personal contact which spur to renewed and greater efforts towards success; which lift one from the ruts into which even the most alert fall when long removed from such contact. Wider acquaintance is of especial advantage to the young man who wishes to rise in his profession—it furnishes probably his strongest hold on success. Finally, it is the duty of every man, since he profits by the accumulated knowledge of those who have preceded him, to add his increment thereto for the benefit of his contemporaries and successors. By cooperation and the weight and authority of numbers, societies can exert an influence for good which would be impossible by individual action.

## Municipal Bonds and New Currency Law

THE new National Currency Law recently passed by Congress is of considerable interest to municipalities in that it apparently offers an invitation—not to say a temptation—to more abundant issue of municipal bonds than has been practiced heretofore. This is the case because of the provision of the law that against "bonds or other interest-bearing obligations of any State of the United States, or any legally authorized bonds issued by any city, town, county or other legally authorized municipality or district in the United States, which has existed for a period of ten years and which for a period of ten years previous to such deposit has not defaulted in the payment of any part of principal or interest of any funded debt authorized to be contracted by it and whose net funded indebtedness does not exceed 10 per cent. of the valuation of its taxable property, to be ascertained by the last preceding valuation of property for the assessment of taxes," an additional circulation may be issued, under the authority of the Comptroller of the Currency, by any national bank having U. S. bond secured circulation outstanding to an amount of not less than 40 per cent. of its capital, and an unimpaired capital and a surplus not less than 20 per cent.

Commenting upon this *The Financier* of New York City says:

The door is open for the issue of \$500,000,000 of National bank note currency based on municipal bonds alone, and it will not be surprising, should the occasion arise, to see a mass of



currency of this character taken out when money rates become firm enough to warrant the issue. True, the tax on such circulation is to be figured at the rate of 5 per cent. per annum the first month, with 1 per cent. increase additional monthly until the rate shall amount to 10 per cent. per annum, but it will be seen that a bank can take out a ninety-day circulation based on municipal bonds alone on an average cost to itself of 6 per cent. per annum, and with money loaning as it does at times in New York and elsewhere at very much higher rates, there would be profit on such circulation even in times other than those designated as panic periods.

This editorial then proceeds to outline a method by which corporations or bond dealers could loan municipal bonds to a bank and receive in return say 80 per cent. of their value as a cash loan, and that, therefore, a considerable bank note circulation based on municipal bonds is possible. This authority does not believe that this practice will become common, but considers that it would be a very unfortunate practice should it become so. In this it apparently does not imply that municipal bonds would not furnish good security, but rather considers the unfortunate feature to lie in the resulting increase in bond-secured circulation. Be this as it may, it would appear as though the perfectly legitimate use of municipal bonds as authorized by this new law would have a beneficial effect upon the municipal bond market and cause this class of securities to be even more favorably considered than before. The fact that Congress classed municipal bonds, and none others, with United States bonds, is certainly a high compliment to the soundness of such securities as an investment.

#### The Planning of Gwinn

THE wholesale planning and even building of towns has been undertaken in several parts of the country in recent years, and is especially possible under conditions found in the Southwest and Northwest, where a few months sees an uninhabited forest or prairie transformed into a city of several thousand population. In some cases this results from the opening up of new land to settlers, as in Oklahoma; in others to the construction of a village of operatives by the enormous manufacturing or mining companies which modern conditions have brought about.

One of the latter is the town of Gwinn, in Marquette County, Mich., which is now under construction by the Cleveland-Cliffs Iron Company. The site of this town was selected in September, 1906, on the advice of the company's landscape designer, Warren H. Manning, of Boston, Mass., who also designed the plan of the town with its streets, village common, park reservations, cemetery, etc. The construction is now going forward under the charge of Chas. H. Pratt as assistant to Mr. Manning. Gwinn is at present contained within an area of one square mile. For the most part the land slopes gradually up from the Escanaba river, thus affording good drainage. The main branch of the Escanaba flows along the westerly side, and the east branch along the south side of the town; and two other streams take an irregular course across the town site, the land along both their sides being reserved as park reservations. Along the river bank grow evergreens, larch, birch,

maple, ash and other trees. On the higher ground the soil is light and sandy, and pines and poplars prevail. On the site proper, where construction work is now going on, are found maples, elms and pines, and much care was taken during the process of clearing and in the designing of the roads to save such of these as seemed suitable for shade trees.

The main streets of the town have a total width of 80 feet, with a parking through the center and two roadways 16 feet wide on either side. Side streets are either 60 or 40 feet wide, with a single central roadway, and a sidewalk on either side. Streets running northeast and southwest are named after different rocks or minerals, and those at right angles to these after various trees or scrubs. The roads will be constructed of gravel, which can be obtained on the site, compacted by steam roller.

Complete sewer and water supply systems are being provided, and house connections are carried to the lot lines at the same time the mains are laid. A pumping station with a daily capacity of two million gallons has already been built on the main Escanaba, above the town. The water of the river has been analyzed and found to be of excellent purity.

Abundant public reservation areas have been proved, which take in the steep bluff on either side of the river valley, and the bottoms of the creek valleys, which are flooded during brief periods of high water. Such reservations seem especially desirable for miners, whose labor keeps them shut in from sunlight and fresh air.

Special effort has been made to design a variety of artistic cottage dwellings which will utilize space economically and be of a construction suitable for this locality. So far fourteen different designs have been built. The cottages are one and one-half stories high, contain four to six rooms, and are built of wood and stucco. It is believed that their artistic appearance and variety will cause Gwinn to compare very favorably with the usual mining town. Sufficient space is left around each cottage to permit of flower and vegetable gardens, and shrubs screen the lawn from view of the street.

The three main streets of the town radiate from the railroad station as a center, and parking is provided around the station, to render it attractive in appearance. Passing from the station one crosses this parking and a bridge over the east branch of the Escanaba to emerge upon the village common, facing which are the stores, bank and hotel, with the central school but a short distance away. In general the street outline may be described as radiating from the depot, superimposed over which is a rectangular street system whose axis is one of these radiating streets. The reservations practically surround the town, with one of about two blocks area a little north of its center. The whole plan shows a most creditable effort on the part of the company to provide ideal surroundings for its operatives. One of the difficulties in connection with the construction is the labor problem. Most of the day laborers up there are lumbermen, who look with contempt on pick and shovel. But this year this difficulty has been considerably lessened by hard times.

## NEWS OF THE MUNICIPALITIES

**Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance**

### ROADS AND PAVEMENTS

#### New Sidewalk Ordinance Promotes Construction

Harrisburg, Pa.—The Street Committee of Council has unanimously approved the Wildman sidewalk ordinance. Under the old ordinance there was a sum of \$500 in the delinquent sidewalk fund, and as the city could not sue on a lien when it had laid the walk until two years had elapsed after the failure of the property owner to pay, the fund was very often exhausted. The new ordinance permits the city to sue within thirty days after the walk has been laid.

#### Wood Pavements About School Building

Hoboken, N. J.—A resolution calling upon the City Clerk to advertise for bids for wooden block paving on the streets adjoining the High School is in pursuance of a general plan to lay a noiseless pavement about all school buildings. Several years will be required to carry out all the work contemplated.

#### Street Paving Assessment Accounting and Laws

Memphis, Tenn.—City Register Ennis M. Douglass, accompanied by R. G. Browning, City Auditor, and H. D. Hughey, Assistant City Register, have returned from Chicago, Indianapolis, Detroit and Toledo, where they have been investigating the methods of accounting with respect to the front foot street paving assessment laws. Much valuable information in matters of detail was collected, which will be of use in carrying out the provision of the Tennessee law passed by the Legislature a few months ago, and now in operation. The most interesting facts developed were that in the cities visited, the municipal government could initiate a movement to pave a street wholly at the expense of property owners, or, at least, under less expense to the city than under the operation of the Tennessee law. Mayor Malone says that the law affecting Memphis will be amended along the lines indicated, and that it behooves property owners who know a good thing to petition for pavement and avail themselves of the advantages of the present law.

#### A Problem in Paving and Resurfacing

St. Paul, Minn.—Interesting sidelights on the paving problem were shown at a recent meeting of the Board of Public Works, when a petition to resurface the asphalt pavement on Summit avenue was rejected. It seems that this pavement was laid twenty-two years ago, that it cracked badly a few years after it was laid, and since then has remained in about the same condition. The question was whether the pavement was good enough to patch up or required resurfacing. The fact that other asphalt streets, laid ten years later, were being resurfaced seemed to some a good argument that Summit avenue needed resurfacing, and an equally good argument to others that it did not. The fact that the surface mixer carried less bitumen than is recommended by the best later practice, and that it was laid without a binder coat, is also interesting. As regards the effect of a pavement on the value of real estate, one property owner said that if he had given his hundred feet of property away, invested the amount of his assessment of \$1,085 at an ordinary rate of interest, the sum would now be \$2,000 greater than the value of his property.

#### To Grade and Roll Earth Roads

Salt Lake City, Utah.—Commissioner of Public Works J. H. McGregor has begun work on his plan of converting some of the important unpaved streets leading into the suburbs into good highways. The idea is simply to grade the streets, giving them a good crown and roll them thoroughly with steam rollers. Mr. McGregor believes that by conscientious work in this simple manner excellent results can be obtained.

### To Take Greater Care in Laying Walks

Milwaukee, Wis.—A new system is in force in the matter of inspecting old sidewalks for condemnation and new sidewalks under construction, at Milwaukee. There has been complaint in the past that inspectors have been very discriminating in their conclusions, frequently ordering up comparatively good walks, while only a short distance away walks which were much poorer were permitted to remain undisturbed. The new regime is to make a careful inspection of old walks and is also to compel adherence to the requirements of the city specifications on new work, whether it is done by the owner or by a city contractor. Repairs are to be permitted where the work is in such shape as to admit of it. The proper engineering levels are also to be maintained.

### Truckmen Want Streets Paved with Granite

Montreal, P. Q.—That some definite plan should be decided on with regard to paving the streets so as to meet the requirements of the city's business, was the opinion expressed at a meeting of the Roads Committee by a delegation representing the chief cartage and transportation companies of Montreal. The petitioners expressed the opinion that streets having the heaviest traffic should receive the first attention and that, for such streets, granite block made the only practicable pavement.

### Women Grade Street

St. Louis, Mo.—Over 400 residents of Schiller place, more than half of whom were women, worked all day Sunday grading a street ten blocks long. They had tried vainly to induce the city to do the work, and, tired of waiting, they decided to do it themselves. At 6 A. M. the women and every child old enough to be of service joined the men, with shovels, hoes and picks. By 10 o'clock the effect of the steady work was shown by two perfectly formed gutters, the length of twenty city blocks. At noon the women quit long enough to serve coffee and sandwiches, then went back to work and stayed on the job until 6 P. M.

### Troy Adopts New Paving Ordinance

Troy, N. Y.—An ordinance has been adopted providing for a new system of awarding street paving contracts. In the future bidders must submit bids for the five kinds of paving material adopted by the city, and the property owners directly benefited will then determine upon the material to be used. The preference, however, will be made known to the Board of Contract and Supply instead of to the Common Council. If no preference is expressed, it will lie with the Common Council to select the material.

### Inspection Trip of Highway Officials

Washington, D. C.—Capt. Edwin Markham, Assistant Engineer Commissioner, and Conway B. Hunt, Engineer of Highways, departed recently for Kansas City, Mo., where they will inspect the application of earth oil on roads and the working of an asphalt patching machine. They will also visit Chicago and inspect the application of a bitulithic pavement, in anticipation of its use in this city.

### SEWERAGE AND SANITATION

#### Sewers Are Built by Direct Labor

Lowell, Mass.—Extensive sewer work in Lowell proper and the annexed territory is being conducted under the direct labor plan under the supervision of Superintendent Morse. Six hundred men work in six-hour shifts, with sixty men in each gang. Five gangs start at 7 o'clock in the morning and work until 1 o'clock, when they are relieved by new gangs.



### New Milk Ordinance in Baltimore

Baltimore, Md.—An ordinance has been adopted amending the food ordinance in those sections which pertain to the sale of milk. The amendments provide that only pure, unadulterated, unsophisticated and wholesome milk shall be sold. Every person or corporation which desires to sell or deliver milk in the city must obtain a permit from the Commissioner of Health to do so. All vendors must supply the Commissioner with a statement of the persons from whom he receives milk. The Commissioner is given power to adopt regulations as he thinks necessary, from time to time, such regulations not inconsistent with other laws or ordinances. Methods of cleaning and returning bottles are prescribed and transfer from one receptacle to another prohibited. The use of preservatives is prohibited. Inspections and the taking of samples are also provided for.

### Can Now Build Sewers

McKeesport, Pa.—Permission has at last been granted by State Health Commissioner Dixon for the construction of the Crooked Run and Sill avenue sewers as originally planned, with the understanding that the storm sewers are to be supplemented with sanitary sewers, in compliance with the State law. Accordingly, two fifteen-inch sanitary sewers will be laid alongside the storm sewer. The intake pipe of the water works is to be extended above the mouth of the Sill avenue sewer.

### Failed to Put in Branch Pipes

New Castle, Pa.—Over a hundred feet of iron pipe laid for a sewer along Sheridan avenue, near the Albert street intersection, is going to cause City Engineer Milholland much trouble, and the city some expense, for it will be necessary for the Engineer to excavate and learn whether or not there are any Y connections along its length, that sewers from houses along the street may tap into it. The pipe was laid years ago on a trestle work. It was of iron, that it might stand the strain. Later a fill was made, and now there are no Y's to join house connections.

### Sanitary Ordinance to Guard Against Plague

Oakland, Cal.—An ordinance providing for the prevention of diseases and for the protection of public health has been passed. The intention is to provide specially against the possibility of the introduction and spread of bubonic plague. Every person owning or occupying a wharf building or basement must protect it by means of cement, netting, etc., from the ingress of rats. All food must be so located as to prevent rats from gaining access to it. Garbage or waste matters must be kept in metal cans. Every person occupying premises must, when ordered by the Board of Health, keep a rat trap freshly baited. Inspectors charged with carrying out the terms of the ordinance are given authority to enter premises during reasonable hours.

### Sewage in Lowlands Cause of Typhoid

Philadelphia, Pa.—Declaring that the lowlands south of West Philadelphia, where the large portion of the sewage of the city is deposited, are breeding places of typhoid from which the disease is carried by insects and in the milk of cows who graze there, all over Philadelphia, the West Philadelphia Business Men's Association has decided to begin an agitation for a remodeling of the city's sewage system. Following the report of Dr. F. A. Faught, who had made an extensive study of sewerage systems, the organization voted to turn over the business of stirring up sentiment against present conditions to the improvement committee, consisting of Dr. Charles Tuttle, Daniel D. Miller and Frank H. Dickinson.

### Dr. Woodward Would Avert Infant Mortality

Washington, D. C.—Dr. W. C. Woodward, Health Officer, has begun a systematic campaign for protecting the lives of the young. Consulting the birth-reports, he is having letters sent to mothers of children born within the past year furnishing them with instructions how to care for infants during the hot weather and how to prepare their food, especially the milk. He contends that the condition of the milk is the keynote to the health

and life of the infant. He has directed his health inspectors to work in conjunction with the Visiting Nurses' Society to visit all new mothers and instruct them in the care of the child. Aside from the instructions in regard to the care of the infant, Dr. Woodward has sent out cards regarding the care of milk.

### Big Leak in Sewer

West Wayne, N. J.—Town Engineer Potter reports to the City Council that a contractor had left a defective joint in the Lakeside avenue drain sewer, which results in a leakage of 200,000 gallons a day. He said the contractor should be required to make repairs and suggested the construction of a tile drain. Councilman Kenney said the improvement would cost \$1,500. The matter was referred to the sewer committee and town attorney for investigation. The sewer is supposed to carry off the water of an underground stream and has a capacity of 270,000 gallons every twenty-four hours.

### WATER SUPPLY

#### Accident Induces Water Company to Make Improvements

Chattanooga, Tenn.—The Chattanooga Water Company has decided to resume the work of laying a duplicate supply main to the city. This improvement was begun some time ago but was suspended when the question of a municipal water supply was agitated. Recently a large Y casting, where the service from the various pumps unite into the 20-inch main, burst without warning, and as a result the city was entirely without water and fire protection for fifteen hours. Besides the duplicate main, the company will, if they follow the advice of the local Underwriters' Association, install a sprinkling system in their pump house which is of old construction and not fireproof, and build a reservoir holding five days' supply of water.

#### Good Management by Water Board

Ilion, N. Y.—The Board of Water Commissioners are in a happy frame of mind over their payment of the first bond of \$3,000 of the Ilion water works on the day it fell due. This is the first bond that has matured and it is the first time in the history of the village that a bond has been paid by one of its departments without calling upon the taxpayers to meet it by taxation. In addition to its payment, \$1,380 was paid on the interest. The first of next month \$1,900 will also be paid on the interest. The municipal ownership of the water system is the best business venture that Ilion ever entered into, and in addition to having the best system and best water in the State, it has a Board of Water Commissioners who have made the enterprise a success. Politics has never entered the board and the men have been selected for their worth and ability.

#### Water Department Is Celebrating

Jersey City, N. J.—The Street and Water Board had the flag flying all last week from the High Service station on Summit avenue. "The flag flies," says Commissioner Finke, Chairman of the Water Works Committee, "in honor of the way the Water Department has raised the cash to wipe out the indebtedness to the Jersey City Water Supply Company. In a short time we have provided nearly half a million dollars. Much of this money has been realized from delinquents who had been dodging water taxes for years. The new brooms in the Water Department are sweeping clean."

#### City Water Pipe Supply Runs Out

Philadelphia, Pa.—In years past it has been the custom for the Water Bureau to purchase a large supply of five and six-inch water pipe for the purpose of making extensions to the water mains wherever requested by builders. This year the item for pipe was cut out of the budget and contractors constructing new buildings where there is no water service are given permission to purchase pipe and to lay mains themselves. The Water Bureau will make the connections and facilitate the work as much as possible. Builders complain that they cannot purchase the pipe in small quantities and lay it for \$2 a foot, the price which the city used to charge.



### Watershed Property Inspected

Newark, N. J.—Since Governor Fort approved the bill authorizing an issue of bonds not exceeding \$1,000,000 for the purchase of land in Newark's watershed, letters containing offers to sell property in the district have been pouring into the office of M. R. Sherrerd, the Chief Engineer of the Water Board. As a preliminary to a request to Council to issue the bonds, Commissioners Boch, Denman and Lambert and Engineer Sherrerd made a trip to the watershed of the Pequannock river in an automobile to look over the properties. A resolution will be prepared embodying the request of the Water Board to the Common Council to issue the necessary amount of bonds, in order that it may be presented to the July meeting of the Finance Committee.

### Water Company Completes Filtration Plant

Butler, Pa.—The Butler Water Company has just completed two filter beds which now gives them ten beds altogether, enough to ensure the city pure water at all times. A new customer, a pressed car wheel company, will use a million gallons a day, an amount equal to that supplied the whole town a few years ago.

### Plans for More Water Considered

Wheeling, W. Va.—A special meeting presided over by Mayor Schmidt was held in the Council Chambers to consider improvements to the water works, funds for which have been provided by a vote of citizens for a bond issue. City Engineer Cooke and Superintendent Junkins of the Water Works favored the purchase of a 20,000,000-gallon pump as soon as it could be built, probably in about a year and a half. While the pump is being built, the question of additional filter capacity can be taken up. Committees were appointed to consider both propositions.

### To Check Water Waste

Williamsport, Pa.—The city Water Board has determined to check as much waste as is possible in the use of the city water supply, and at a recent meeting they decided to have inspectors examine all the water service of the city. They will inspect the service of all consumers, including manufactories, elevators, and all users, whether of a great or a small supply. They will also see that owners of property keep the pipes in repair.

### STREET LIGHTING AND ELECTRICITY

#### Restricts Sale of Control

Albany, N. Y.—The Up-State Public Service Commission has announced that its settled policy was "not to grant permission for a foreign corporation to acquire control of any domestic corporation furnishing gas or electric service in this State, for the reason that as soon as it became a part of a foreign corporation, the power of the commission to control its capitalization was lost and this was one of the important powers which the Public Service Commission law took care of." This announcement came out in connection with an application of the Twin State Gas and Electric Company and the Hoosick Falls Illuminating Company for authority for the latter to transfer its franchises and works to the former by merger, and for the Twin State Gas and Electric Company to acquire the capital stock of the Hoosick Falls Company. The Twin State Company is a Connecticut corporation, which has a plant at Bennington, Vt., and it desires to acquire the Hoosick Falls plant, 12 miles distant.

### Stringing Wires Over Private Road Unlawful

Bayside, N. Y.—Magistrate Fitch of Flushing, New York City, fined three—all that were arrested—of a large gang of workmen stringing a supporting cable for wires on the highway at Bayside, New York City, fronting the estate of Mary L. Weeks, the owner of the road in fee as proven. Though the company had secured a city permit by representing that condemnation proceedings were closed, the judge held that it gave no rights without the consent of the owner. He further stated that the charge of disorderly conduct was not as strong as might have

been brought. Unlawful intrusion would have entailed a year's imprisonment as a misdemeanor. As it was, the limit of fine was imposed, \$10 each.

### Mayor Holds Up Lighting Franchise

Jersey City, N. J.—In vetoing the ordinance granting to the Mutual Benefit Light and Power Company a franchise to establish a public lighting plant in the city, Mayor H. Otto Wittpen made a number of suggestions as to conditions that should be incorporated in the franchise. Chief among these is a provision that if the new company should merge or combine to control rates with any other company, the franchise should become void. Minor points which the Mayor wants incorporated in the ordinance are: a provision by which the conduits laid may be used for municipal purposes; payment of inspectors' wages supervising street openings and construction; limitation to the number of feet of street to be opened at one time; use of smoke-consuming devices at power plant; a clear statement that the 5 per cent. to be paid the city on gross receipts is exclusive of all State taxes.

### New Arc Lamp for Street Illumination

Syracuse, N. Y.—Seeking to improve the illumination of the streets of Syracuse, Mayor Alan C. Fobes and Commissioner of Public Safety Harlow C. Clark have completed arrangements for the adoption of a new type of arc lamp here. The light to be adopted is a new type of magnetite arc lamp and is similar to those now used in the downtown district of the city, except that it has a far greater illuminating power. It is understood that a trial of the new lamp was urged by Superintendent H. J. Blakeslee, of the Bureau of Gas and Electricity, who has made a study of its operations and regards it as vastly superior to that now provided under the \$68 rate paid by the city.

### FIRE AND POLICE

#### New Law Favors Volunteer Firemen

Albany, N. Y.—More than 100,000 active and retired volunteer firemen in the State are interested in the Harte bill which has been signed by Governor Hughes. The bill originated with the Westchester County Volunteer Firemen's Association and was backed by the Law Department of the State Firemen's Association. The main feature is that it gives a certificate to every volunteer fireman in the State who has served five years, providing his record is clear on the books. This certificate exempts him from jury duty and gives him the same privileges under the Civil Service laws as are now enjoyed by veterans of the Civil and Spanish wars. Heretofore certificates, although given to firemen at the end of five years, were open to attack because there was no uniform way of making them out.

#### Competition in Furnishing Auxiliary Alarm Boxes

Portland, Ore.—While a franchise asked for by the National Automatic Fire Alarm Company for the privilege of connecting up private fire alarm boxes with the city fire alarm system was pending before Council, an application for a similar franchise was received from the Northwestern American District Telegraph Company. The first-named company offered one per cent. of its gross receipts, and the latter company 33 1-3 per cent., provided the company installed its own boxes in the streets, and 40 per cent. if the wires of the auxiliary boxes were attached to the city boxes already in place. Besides, the telegraph company offered to make a maximum charge to customers of two dollars a month, as compared with four dollars by the alarm company.

#### New Rules Favor Policemen

St. Joseph, Mo.—Two new rules have been adopted by the Board of Police Commissioners. One provides that patrolmen who have served twenty continuous years on the St. Joseph police force will be assigned to day duty only. According to the other rule, all employees will hereafter receive a vacation of fifteen days on full pay, instead of twelve days, as hitherto.

### Stringent Insurance Law Would Decrease Incendiarism

Boston, Mass.—There is believed to be more incendiarism in Massachusetts now than at any time in the State's history since the establishment of the fire inspection department of the State police. Deputy Chief Neal of the State police believes that an insurance law similar to that of New Hampshire, which compels fire insurance companies in the case of total destruction of insured property by fire to pay the full amount of the policy, would tend to decrease incendiarism. Agents would then be less liable to insure property and the temptation to incendiarism would be removed.

### New Regulations for Bridgeport Fire Department

Bridgeport, Conn.—In pursuance of President Bullard's policy of adopting modern methods in fire fighting and fire prevention as well, the Board of Fire Commissioners have decided upon a number of new and interesting regulations and considered a recommendation from Fire Chief Mooney for the appointment from the permanent force of a Deputy Marshal, whose duties will consist of a regular inspection of buildings and cellars with the purpose in view of minimizing the possibility of fires. The Board voted to adopt a new hat with drooping brim which is used in New York and other large cities. It is known as the "Heinie" hat and has a pronounced military style. It was also voted to purchase another "Dutch" smoke protecting hat for the general use of the department. It was also voted to change the insignia of captains and lieutenants from gold to silver and to designate the rank of lieutenant by a silver trumpet on the caps. Hereafter all companies must hold drills at regular intervals, hose companies must wet all hose at least once a month, and hose must be changed on hose wagons at least twice a month, trust companies are required to drill twice a month and steamer engines must run at least once a month.

### Merits of Card System for Regulating Saloons

Grand Rapids, Mich.—At a recent meeting of the Board of Police and Fire Commissioners, the merits of the card system of keeping track of the conduct of saloons was discussed by Mayor Ellis and Police Commissioner Bender. The Mayor had sent a letter to the Board asking it to instruct Superintendent Carr that when a saloon man is found violating the law to call the man into his office and read him a lecture, but not to maintain a set of "spy cards" to lay up information to be used against the saloon keeper at the end of the year when he wants another license. Commissioner Bender defended the card system; he maintained that since the first of May when the card system was not in use more saloon keepers had been arrested and brought into court for selling liquors to minors than had been arrested in all last year with the card system in use, when letters used to be written every day giving warning.

### Overhead Wires a Menace to Firemen

Harrisburg, Pa.—Fire Chief Garverich recently made a strong plea for the removal of overhead wires, especially in the business district, before the Councilmanic Fire Committee. He said that in Strawberry street and parts of other streets the network of wires is so bad that it is impossible to raise a twenty-foot ladder among them. It is doubtful, the Chief said, if any active fireman would care to undertake to cut the wires at a fire.

### Engineer Prefers High-pressure Service to Fire Boat

Newark, N. J.—The question of high-pressure fire service and who should pay for it was discussed at a meeting of the Board of Works. President Bock thought the work should be paid for by abutting property owners. Chief Engineer Sherrerd argued that high-pressure fire service was a public benefit. He argued that if for want of a high-pressure service, a factory rated at \$150,000 should be burned down and not rebuilt in five years, the loss to the city in taxes would be enough to pay for floating \$50,000 bonds for the extension of the service. A high-pressure system with fire hose stations distributed throughout the city, Mr. Sherrerd said, would be worth more than the fire boat which the Fire Board has asked for.

### Thinks Well of Dog Police

Madison, N. J.—Councilman G. W. Downs, of Madison, spoke well of the idea of having police dogs while on a visit to the South Orange police. Mr. Downs is a member of the Police Committee of the Madison Council, which, he said, would soon consider the advisability of purchasing a staff of dog "cops." The members of the Madison Police Committee, it is expected, will visit the village jail in the near future to have a consultation with the South Orange police regarding the value of the dogs.

### Chief Recommends Study of Water Pressures

Newburgh, N. Y.—In his annual report Chief Engineer Keefe suggests that the members and officers of the Fire Department make a study of the various degrees of water pressure throughout the city. For instance, on Washington Heights the pressure is light, and at times two streams would do better than a dozen streams, owing to the low pressure, and the same is true in West Newburgh. In that part of the city east of Montgomery street there is a good pressure.

### Traffic Police Formed Into Three Precincts

New York, N. Y.—Commissioner Theodore A. Bingham has made another step in the development of the traffic squad, separating it from the rest of the Police Department. The 500 traffic men are now divided into three separate precincts lettered A, B, and C, respectively. Precinct A, with 150 men, will cover streets south of Canal. Precinct B, with 150 men, will cover the territory between Canal and Twenty-third streets, with headquarters in a new station house, 36 East Ninth street. Precinct C, with 200 men, headquarters 1 East Twenty-seventh street, will cover the city between Twenty-third and Seventy-third streets. As before, all traffic men are in charge of Inspector Schmittberger.

### New Police Boat Launched

San Francisco, Cal.—The handsome new police patrol boat was launched recently from the yards of William Cryer, of Oakland, with customary ceremonies, in the presence of Police Commissioner Hugo D. Keil, Chief of Police Biggy, the captains of the various divisions and a party of fifty guests. The boat was christened "Patrol" by Miss Ida Hathaway, the nine-year-old daughter of the late Captain Hathaway. The boat will be put in commission for police duty in the bay immediately.

## GOVERNMENT AND FINANCE

### Steps Taken for New Charter

Buffalo, N. Y.—The Committee on Laws and Legislation of the Board of Aldermen took a first step toward providing Buffalo with a brand-new home-rule city charter. The committee by unanimous vote agreed to report in favor of calling for a referendum of the voters of the city at the election on November 3 on this question: Shall the city of Buffalo ask the Legislature of the State for a new and simplified city charter, which shall provide for the largest possible measure of home rule; to be submitted to the electors of the city before taking effect?

### Commission Government Established in Chelsea

Chelsea, Mass.—The "Galveston plan"—city government by commission—was put on trial June 4 for the first time in New England in the city of Chelsea, with 37,000 population, which a few months ago was devastated by a \$9,000,000 fire. The five commissioners, appointees of the Governor, supplant Mayor, Aldermen and School Committee and all other city officers. They are a civil engineer, a banker, a builder, a school teacher and a lawyer. All but the banker are supposed to give the work their full time. The banker serves without pay, but the engineer, who is chairman, receives \$5,000 a year, and the other three members \$3,000. They have full power to appoint officials and to carry out the work of restoring the burnt districts of the city. In 1913 the city will return to its old form of government, unless the legislation otherwise provides.



### Memphis Refunds Old Debt

Memphis, Tenn.—The city has made arrangements for re-funding an issue of \$551,000 6 per cent. bonds, issued in 1879. The new bonds issued in their place bear 4 1-2 per cent. interest and were sold at a premium of \$14,000. It is believed that there are \$5,000 to \$10,000 of these bonds that will never be returned for redemption.

### Newark to Adopt Civil Service

Newark, N. J.—Steps are being taken to have Newark adopt the new civil service law passed by the Legislature. The Law Department will prepare ordinances which, however, will not be introduced in Council until the August session, when the annual tax ordinance has been finally passed. A plan for equalizing salaries for clerks and others performing like services will be agreed on first.

### Lighting Plant But No Separate Commissions

Passaic, N. J.—At the special election, June 2, to decide the questions of building an electric light plant and turning the Police and Fire Departments over to separate commissions to be appointed by the Mayor, the proposition for the lighting plant carried by a vote of 999 to 248 and the commission feature was lost by a vote of 906 to 458. The general sentiment regarding the Fire and Police Commissions seemed to be that a good deal of unnecessary expenses in the way of salaries would be put on the city and that there was a good deal of personal politics in the present change.

### Pittsburg Bond Issues Deferred

Pittsburg, Pa.—Mayor George W. Guthrie, who has returned from a vacation to Atlantic City, announced he will not send any ordinances for bond issues to Councils for some time. He is still in favor of waiting until the pending law suit over the acquirement of the plant of the Monongahela Water Company is decided. Mr. Guthrie indicated that he does not favor taking over the Seventh street bridge by condemnation proceedings, saying that what the city has acquired by the proceedings so far is not a free bridge but another law suit of which the city already had a superfluity.

### City Treasurer's Fee Reduced One-half

Wilkes-Barre, Pa.—The Law and Ordinance Committee of Councils has recommended an amendment reducing the fee of the City Treasurer from one per cent., upon moneys received to one-half of one per cent.

## REFUSE COLLECTION AND DISPOSAL

### Must Collect from Back Yards Instead of Sidewalks

Hartford, Conn.—The new garbage contract, which requires the removal of garbage and ash cans from the back yards instead of from sidewalks, as previously, went into effect June 1. The company having the contract has purchased nine wagons of special design with an opening on either side and in the rear so that the barrels do not have to be lifted over the top of the big wagons which carry nine or ten cubic yards.

### New Device Unloads Garbage in Hurry

Oakland, Cal.—The contractors who have undertaken the work of transporting the garbage from the city of Oakland to sea have perfected a device which does away with all the previous difficulties in getting the cargoes overboard. A member of the Wall Brothers, the contractors, stated that the one bin which had been rigged in accordance with the latest idea was emptied within three minutes. The water pressure is so great on the waste in the bins when the unloading is going on that the mass of heterogeneous trash is carried overboard with such force it is sunk below the surface, and so far as the men on the "Signal," the garbage scow, can discover, it never reappears. At least, it is in a condition to be readily dissolved by the water as it is swept out to sea by the current. The "Signal" unloads ten miles outside the heads, and that requires a round trip of about forty

miles. With the latest arrangements for unloading, the vessel can run from the foot of Broadway out and back, unloading when at the outer end of the journey, and be tied up within five or six hours from the start. The entire shipload of 500 tons can be sent overboard within forty minutes.

### Would Provide for Sprinkling with Oil

Boston, Mass.—A bill is being prepared for presentation in the Legislature permitting the municipalities to sprinkle streets with oil or other liquid preparations and assess a whole or a part of the cost on abutting property owners in the usual way, as in the case of the sprinkling with water.

### Council Orders Two-bushel Garbage Cans

Donora, Pa.—An ordinance requiring each family residing in the borough to provide itself with a garbage can, to hold not less than two bushels, and to have a cover, was passed by the Borough Council on first and final reading by suspension of the rules. The ordinance carries a penalty of not less than \$3 nor more than \$20 fine. There being some doubt as to what committee had jurisdiction over garbage matters, it was decided to appoint a new committee to be known as the Garbage Committee.

## PARKS AND OUTDOOR ART

### Detroit Has Nine Amateur Baseball Diamonds

Detroit, Mich.—In accordance with suggestions made in Mayor Wm. B. Thompson's annual message, permission has been obtained from the owners and agents of vacant property for the use of nine fields for baseball diamonds for amateur baseball teams. The Mayor states in a communication to Council that the sum of \$500 will put these grounds in fair condition. He hopes to see more grounds added to the list each year.

### Progress on St. Louis City Plan

St. Louis, Mo.—A brief enumeration of the improvements recommended in the report of the City League on city plans, published more than a year ago, shows that the work has by no means been forgotten. Five small parks in the crowded districts of the city have been located, and means for their improvement provided in a bond issue. Ordinances locating the sites have been passed and Commissioners appointed to fix the price. Condemnation proceedings to acquire the right of way for the Kings highway are being pushed. The river bluffs at the foot of Caldwell street, six acres in extent, have been condemned as the southern terminus of the boulevard. Engineers are making surveys over the whole course to the city limits. Conferences have been held between officers of the League with the Government officials for the purpose of inducing Congress to appropriate funds for a National highway to the Jefferson Barracks Reservation. Plans for the improvement of the River Des Peres are being made there in reference to the sewerage finished. Bills are being prepared for introduction in the Legislature next fall for the establishment of an outer park system in St. Louis County. Architects are now drawing plans for the construction of the public building on the half block between Center and Fourteenth streets, Market street and Clark avenue. The ordinance for the purchase of the land has been passed, and Commissioners appointed to determine the price. More improvements are being planned or are under way than at any time in the history of the city.

### Tag Day in Washington

Washington, D. C.—To meet the emergency of the failure of Congress to make appropriations for playgrounds, as formerly, the Washington Playgrounds Association appointed June 13 as tag day. Tags were sold at from five cents to one dollar each. Storekeepers purchased a tag for each show window and for every employee. Automobiles throughout the city were tagged and few citizens went undecorated. When Tag Day headquarters closed \$5,005 had been received, the school children, ladies' aid and the business men having reported. The remainder of \$10,000 or \$11,000 required will be raised by other means.



### Divestiture of Public Privileges in Public Parks

New York, N. Y.—The City Club has addressed a communication to the Board of Park Commissioners stating that they have found in the parks of Manhattan and Richmond fourteen private clubs, two hotels and six residences; in the parks of the Bronx, fourteen private clubs, eight hotels and ten residences, and in those of Kings and Queens, one private club and twelve residences. They urge the Board:

To recommend the removal of all privately-owned buildings from public park lands.

To prohibit the use of any building for hotel or lodging business.

To destroy or convert to public or charitable service all buildings leased as private residences, or to recommend to the Sinking Fund Commissioners that they shall be sold for removal.

To deny renewal of existing privileges to clubs and similar organizations.

In place of clubhouses the club advocates an extension of the practice of erecting shelter and locker-houses for the patrons of such sports as rowing, golf, tennis, skating, swimming, etc., and solicits the interest of the Mayor and Board of Estimate particularly in establishing at Pelham Bay, at Shore Road, and at Riverside a public yacht and boat house, houses, anchorages and landings, to be operated on the self-supporting principle of the municipal golf-houses in Van Cortland and Forest, and the municipal boat houses in Prospect and Bronx.

### Improving Small Parks

Philadelphia, Pa.—The improvements of small parks and the little plots at street intersections throughout the city acquired to give the people open spaces is being prosecuted by the Bureau of City Property. Bidders have been asked to submit prices for the improvement of seven of these small parks and the City Forester is working on the plans of an additional six; the money will come out of the \$150,000 item for the improvement of small parks contained in the \$10,000,000 loan.

### RAPID TRANSIT

#### Mayor Would Improve Transit Conditions

Evansville, Ind.—Mayor J. W. Boehm has sent a message to the Common Council denouncing the service of the Evansville and Southern Indiana Traction Company and charging violations of its franchise. He characterizes the condition of the tracks and roadbed as faulty and unsafe and the cars as low class, filthy, unsanitary and dilapidated. He urges Council to either compel the company to comply with the provisions of its franchise or to cancel it. Regarding the claim of the company that it cannot furnish good service to the city because it is not making money, the Mayor says that the capital stock and bonded obligations of the company have been unduly multiplied. He bases his hope for a remedy of the conditions in a clause in the franchise which says that, if the company does not comply with the terms of the franchise, its right may be forfeited after ninety days' notice.

#### Plan Standard Code for Interurban Electrics

Lansing, Mich.—Chairman Glasgow, of the State Railroad Commission, has named a committee of four to formulate a code of standard rules for the operation of interurban railways in Michigan. Harry Bullen, General Superintendent of the Detroit United Railway, was named Chairman. The committee is expected to report back to the Commission within the next two months, and after a further conference the code will be submitted for the consideration of all suburban roads. The question of train dispatching, whether by written or verbal methods, will be one of the first matters taken up.

#### Gas-Electric Motor Car Tried for Suburban Service

Perth Amboy, N. J.—The Lehigh Valley Railroad has completed arrangements to try the gas-electric motor car made by the General Electric Company on some of its branch lines, to demonstrate its availability for service in handling suburban passenger traffic. The first trial of the car will take place on the Perth Amboy branch between Perth Amboy and South Plainfield, and it will be used during the trial tests to take the place of the steam passenger train now running on that branch. The motor car will carry 44 passengers and has a baggage compartment.

### MISCELLANEOUS

#### Street Obstruction Ordinance Revised

Detroit, Mich.—An amendment to the Compiled Ordinances of the city regarding street encroachments and obstructions has been passed. It is provided that no one shall obstruct a street, wharf, alley, or public place, except as specified. The Department of Public Works may grant permission for temporary obstructions not over six feet high—this, however, does not apply to storm doors in winter, which may be ten feet high and eight feet wide and project three feet into the street, where the sidewalk is ten feet wide. On sidewalks ten feet wide merchants may occupy three feet next to the buildings for shipping or displaying goods. Exceptions are made to these rules on certain streets where all but eight feet of the walk may be occupied. Authority to sublet or lease any portion of the sidewalk space is forbidden and any person found doing business in such a location may be summarily removed. No structures of even a quasi-public character will be permitted to extend beyond the lot line.

#### Uniforms for City Employees

Grand Rapids, Mich.—Following the example that has been set by other metropolitan cities, General Manager Samuel A. Freshney has reported to the Board of Public Works that he has purchased badges for the highway workers, who are also to be uniformed. The new khaki suits for the street employees were recommended by him to be purchased by the employees themselves, the Board giving the men their helmets and badges.

#### Public Baths, Playgrounds and Comfort Stations

Newark, N. J.—In a message to the Common Council, Mayor Haussling calls attention to the needs of this city in the matter of public baths, playgrounds and public comfort stations, and urges that liberal appropriations be made for improvements on these lines in the tax levy of this year.

#### City Urged to Build Sea Wall and Control Docks

Seattle, Wash.—John T. Flynn, Vice-president of the American Engineering and Construction Company, the engineer who prepared plans for the proposed \$50,000,000 sea wall at San Francisco and Oakland, has been in consultation with city officials. Health Commissioner J. G. Crichton has called attention to the value of a concrete wall and docks as a sanitary measure as a means of destroying the abiding places of rats. Mr. Flynn estimates that a reinforced concrete sea wall forty-five feet deep, seven feet wide at the bottom and seventy-two inches at the top would cost about \$200 a lineal foot, or \$10,000,000 altogether. If the city would build the wall and docks, it could reduce wharfage rates and retire the bonds in a few years.

#### Toledo Holds First Municipal Parade

Toledo, O.—Toledo's first municipal parade, held June 6, was a distinct success. The public turned out in force to see the show and Mayor Brand Whitlock and a party of city officials occupied a reviewing stand at the armory. The parade was headed by the motor police, followed by Chief Perry Knapp and the mounted squad. Patrolmen, in companies, followed, the patrol wagons and ambulance bringing up the rear of the police division. Fire Chief William Mayo led his department with all the men and apparatus that could be safely spared. Workhouse prisoners drove wagons used at that institution and made no attempt to escape. The water works, street and other departments under the Service Board, wound up the review.

#### Would Kill Tramp Dogs Rather than Muzzle Licensed Ones

Washington, D. C.—Commissioner Macfarland is fixed in his determination not to order all dogs muzzled. Instead, he proposes to remove entirely the dangerous dogs. Past experience shows that comparatively few dogs are muzzled when orders are given and these are the least dangerous of all dogs, the licensed animals belonging to well-to-do people. In opposition to the Commissioner's attitude is the assertion of Dr. Mohler, Chief of the pathological division of the bureau of animal industry, who says that rabies has been eliminated in England by muzzling all dogs.

## LEGAL NEWS

### Summary and Notes of Recent Decisions—Rulings of Municipal Interest

#### OBSTRUCTION OF STREETS—ABUTTING OWNER

**Fugere vs. Cook, City Treasurer.**—In an action against a city for injuries to plaintiff's business by the continued obstruction of a street on which it was located, evidence held to require a finding that the street was not obstructed for an unreasonable time. Where, in an action by an adjoining property owner for injury to his business by the obstruction of a street for the construction of a sewer, plaintiff's estimate of his damages was supported only by a memorandum of his gross charges with no record of the expenses of the business, and there was no successful effort to trace the diminution in the volume of the business to the closing of the street, no customer having been produced or named who was prevented from dealing with plaintiff by the condition of the street, the proof of damage was too speculative to sustain a recovery.—Supreme Court of Rhode Island.

#### STREET RAILROAD—ABUTTING PROPERTY

**Denver and Santa Fe Railway Co. et al. vs. Hannegan et al.**—On a city authorizing the use of a street for railway purposes, abutting property owners are only entitled to recover for injuries suffered by them as such, and not for such annoyance or inconvenience as is common to the general public; they being entitled to indemnity for permanent interference with ingress to, or egress from, their lots, and for loss in the value thereof, or otherwise, and the measure of their compensation being the actual diminution in market value of their premises for uses to which they might reasonably be put, caused by the operation of the railroad through the street.—Supreme Court of Colorado.

#### LEGALITY OF ORDINANCE—PRESUMPTIONS

**City of Greenwood vs. Jones.**—An ordinance fixed the Mayor's office in the City Hall as the place of meeting of the Board of Aldermen, and the time at 8 o'clock p. m. on the first Tuesday of each month, "or any place that may be selected by special order." The caption of the minutes of the meeting at which an ordinance prohibiting the retailing of liquor was passed showed that the Board met at the City Hall and a quorum was present, but did not show affirmatively that that was the time and place fixed by law for holding the meeting, except that it was on the first Tuesday of August and at the City Hall on August 7, 1906. Code 1906 provides that a copy of an ordinance, certified to by the Clerk of the municipality, or the ordinance book in which it is entered, shall be prima facie evidence of the existence of the ordinance, and that it was adopted and published according to law. Held, that the presumption is that the ordinance was passed at a meeting held at the proper time and place, in the absence of a showing to the contrary, since a Board of Aldermen is not a tribunal exercising jurisdiction under limited power, but the case is one of the exercise of general jurisdiction for the establishment of public laws adapted to the municipality.—Supreme Court of Mississippi.

#### POWER OF REMOVAL

**Johnson vs. Shea, Mayor, et al.**—The repeal of a statute by implication is not recognized, unless the new legislation is inconsistent with the old. The Quincy city charter gives the Mayor the power to appoint municipal officers, including a Board of Assessors, and authorizes him to remove any officer for any cause which he shall deem sufficient. Statute 1900 repeals the provision for a Board of Assessors and changes the Board by making the term of office of its members three years, instead of one, and provides that the Board shall consist of a Chairman and two other members, etc. Held, that the Assessors appointed under the act of 1900 were subject to removal by the Mayor.—Supreme Judicial Court of Massachusetts.

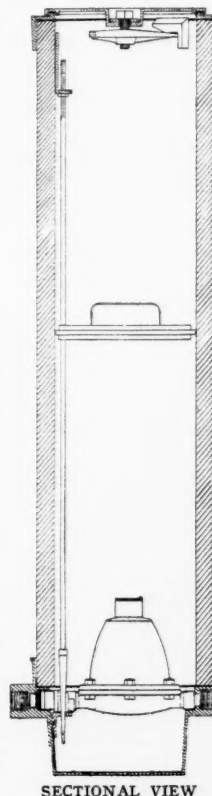
#### LATERAL SUPPORT OF STREET

**Village of Haverstraw vs. Eckerson et al.**—Whether the acts of persons menace the condition of a highway in a direct manner, or indirectly, by so digging or excavating upon the adjacent lands as to affect the lateral support, and to cause or to threaten the subsidence of the highway, the exercise of the equitable power of the court may properly be invoked by the municipality in restraint of their continuance.—Court of Appeals of New York.

## MUNICIPAL APPLIANCES

### Ford Meter Box

THE meter box manufactured by the Ford Meter Box Co., Hartford City, Ind., consists of a cylindrical barrel, a top, a bottom, an inner lid, the connection, and the gasket holders. The cylindrical barrel or body of box is a section of salt-glazed vitrified pipe, impervious to water and proof against the elements. The top consists first, of a cast-iron ring which hoods down over the body of the box and is cemented thereto. It has on its upper surface a ground flange that fits up to the asbestos gasket in its lid. It also has two lugs upon its inner diameter under which the lid latch lays when the lid is on. It also has a triangular piece projecting down into the box through which is the tie-rod which binds the top and bottom of the box together. This triangular piece has two lugs projecting in the box between which the wedge stem rests. Second, of a cast-iron lid, which is provided with an asbestos gasket in the groove on its under side, which fits down on the flange of the top ring just described; a cast-iron latch bar; a brass pentagon-headed screw, with its rubber gasket and iron washer which, when the lid with its latch bar is in position on the top ring, draws the lid firmly down on the flange of the top ring, thereby making, with the aid of the asbestos gasket, a tight joint. By a simple turn of the screw the lid is loosened and can be turned and lifted off, an operation requiring but an instant. A glance at the cuts will make all this quite clear. The bottom or pot-piece is made from cast-iron. The lower part is pot shaped while the upper part has a flange that projects upward and around the body of the box and is cemented thereto, similar to the top ring. In fact, the body of the box sets up in the top ring and down in the bottom piece a sufficient distance to give a good bonding joint. The pot piece has an inlet and an outlet port as shown in cuts. The outer ends of both ports are threaded to receive 3/4-inch gas pipe or any standard 3/4-inch fitting. The inner end of inlet port is milled out to receive the male connection and its female piece or packing gland with its rubber packing ring. The inner end of outlet port, with its saddle, is simply milled out true to receive the outlet spud of meter with its gasket. Under the inlet port is a brass-covered bracket piece on which rests the connection. In the bottom of the lower piece is a drain hole threaded in which is screwed a 1/2-inch gas pipe plug. In sandy or well drained soil this plug can be removed so water accumulating from a leaky meter, or escaping back into the meter box from a house connection when a meter is being changed or removed, can drain away. All cast-iron parts are coated in the same manner as water pipe, by heating them to 300 degrees and placing them in pitch and linseed oil at the same temperature. The inner lid is a sandwich made of two circular pieces of wood with a layer of wool felt placed between them, with a convenient hand hold on the upper side, securely fastened together. The diameter of the wooden part is a little less than the inside diameter of the body of the box. The felt piece is larger than the inside diameter of the box. When the lid is placed in the box it completely packs off the lower meter chamber from the upper one. This inner lid is held in place by three galvanized iron jack chains, the upper ends being fastened to the top of the box and the lower end to the inner lid. The chain allows the lid to be removed and replaced easily and prevents the lid from accidentally being left out of the box for the reason that the cover of the box cannot be replaced with the inner lid out unless the chains are broken off.





## NEWS OF THE SOCIETIES

**International Association of Police Chiefs.**—More than 140 police officials gathered at Detroit, Mich., June 2, for the opening of the fifteenth annual convention of the association. Mayor William M. Thompson welcomed the chiefs and after the appointment of the committees and transaction of routine business, Major Richard Sylvester, President of the Association, made his annual address. He strongly indorsed the plan to have the Federal Government take charge of the National Bureau of Identification at Washington, and stated that he had assurances of sufficient support of the plans by Senators and Congressmen to practically insure its adoption by Congress.

At the afternoon session, W. A. Pinkerton of Chicago gave an interesting address on Second Storymen, or Porch Climbers. He was followed by Chief of Police Frederick Kohler of Cleveland, who urged a measure of leniency and kind treatment for juveniles and first offenders. An animated discussion followed Chief Kohler's policy, James McWeeney of South Bend, and J. H. Madrox of Fort Worth, Texas, agreed with the Cleveland Chief while Superintendent of Police John J. Downey of Detroit, George J. Schoeffel of New York, and Captain F. J. Pumphery of Baltimore, opposed the idea. In a general way criticism of the Kohler policy took the line of argument that discretion in the treatment of persons caught in the commission of an offense should be left to the courts, the policeman's duty being simply to make an arrest when he discovers a violation of the law.

Chief Goodrich of Binghamton, N. Y., in an address on Hoboes, charged that the railroads were largely responsible for the existence of these wanderers as the railroad police did not properly police the trains. George J. Schoeffel, Superintendent of the Police and Fire Departments of the Erie railway, in reply declared that the responsibility did not lie with the railroads. The transportation companies he said were heavy taxpayers and were entitled to police protection just as other taxpayers were.

Chief Michael Reagan of Buffalo, discussing the recent crime wave, said that the wave has existed principally in the columns of the newspapers.

The second day's features of the Convention were an extemporaneous talk at the morning session by Chief Shippy, of Chicago, who scouted the golden rule theory of dealing with offenders and a review of the Detroit police in the afternoon. "There might have been a time in Chicago when the golden rule was followed in police practice," said Chief Shippy, "but the new rule is 'Do Others Before They Do You.' This latter rule worked very well when I was attacked recently in my own home by a supposed anarchist."

Chief Shippy's remarks were made in a discussion that followed a paper on the subject of "Carrying Firearms," which was read by Chief John C. Hayden, of Rochester.

On Wednesday, the third day of the convention, the Association adopted a resolution earnestly soliciting the cooperation of President Roosevelt, Federal and State Legislatures in the establishment of a uniform law governing the sale and use of dangerous weapons. The resolution, offered by James McWeeney, Chief of Police of South Bend, Ind., was greeted with hearty applause. It was an outgrowth of the remarks of Chief Ship-

py, of Chicago, before the convention the previous day, when he detailed the manner of controlling the sale and carrying of weapons in Chicago.

Chief Kohler, of Cleveland, introduced a resolution calling on the Chiefs to go to the newspaper offices in their respective cities and ask that the continual ridiculing of the police be stopped, and that principals of schools be urged to have the teachers instill into the children respect for the police force. The resolution was adopted.

Chief of Police W. P. Chandler of Knoxville, Tenn., on the morning following the banquet at which 200 quarts of wine disappeared and just before a visit to the Walkerville distilleries, read a paper in which he said prohibition laws can be enforced and that it is up to the Police Department to enforce them. He told how it could be done and said that there were no excuses for failure.

After positively refusing to take the presidency, Superintendent John J. Downey was unanimously elected First Vice President of the Association at the closing session. Major Richard Sylvester, of Washington, who said that he would gladly step down and allow Superintendent Downey to assume command, was reelected to the Presidency. On behalf of the visitors, Allan H. Frazer, in a neat speech, presented Superintendent Downey a gold watch and charm. Chief Harvey O. Carr, of Grand Rapids, was reelected Secretary amid applause. He wanted to step down. George C. Tonney, of Elizabeth, N. J., was elected Second Vice President. Los Angeles will be the scene of the next convention.

A number of papers were read at the closing session, one on "The Causes of Crime," by Chief William F. Gunn, of Hartford, Conn., being of much interest. Chief John C. Whitaker, of Dayton, Ohio, read a paper by Mrs. Holland on "Finger Prints as an Aid to Identification." Chief Henry Jennings, of Atlanta, Ga., said that there are fewer arrests on petty charges, drunkenness, loafing and disturbance, where prohibition is in force.

Resolutions were adopted thanking the police, people and press of Detroit for the good time during the week. In the afternoon the Chiefs were taken to Mt. Clemens.

**Boston Society of Civil Engineers.**—The Society held its regular meeting June 2, in the form of an excursion to Lawrence and Lowell. The party, about forty in number, including Irving Farnham, City Engineer of Newton, Frank L. Fuller of the Boston Board of Engineers, City Engineer A. K. Crowell of Taunton, City Engineer Brewer of Waltham, Superintendent of Streets Ross of Newton, John C. Chase of Derry, Engineer Barker of Lowell, and many other prominent civil engineers of Greater Boston, arrived at the South Lawrence station at 9:10 o'clock and were met by a local contingent and a special car, which conveyed the party to the Experimental Station of the State Board of Health. Thence the visitors went to the pumping station on Water street to inspect the pumps and filter beds. They were met at Lawrence by Engineers Marble and Priestman, Chemist Gage, Engineer Hale of the Essex Company, D. J. O'Mahoney, Superintendent of the Filter Plant, Superintendent Collins of the Water Works, and Members Desmond, Dr. Fleming, John McCarthy and William Cusack of the Water Board. City Engineer Marble read a paper on the workings of the old and new filter

and the water of the filter bed was then drawn off so that the visitors could walk about and inspect the plant. They expressed themselves as much pleased with the filter and were quite interested. A light lunch was served by Superintendent Collins. Thence the party went to the Pacific power plant and were shown about. At 12:20 o'clock a special car was boarded for Lowell where the visitors spent the remainder of the day as the guests of Mayor Farnham and associates.

**American Association of Park Superintendents.**—At a meeting of the executive committee at Hotel Genesee, Buffalo, N. Y., arrangements and a preliminary program were made for the next annual meeting at Minneapolis, Minn., August 11-14. The headquarters will be at the West Hotel, where the business meetings will be held and the technical papers read. Visits will be made to Lake Harriet, the St. Paul park system, the Minneapolis park system and Lake Minnetonka. Papers are suggested on the following topics: "Concessions," "Oiling and Dust Laying," "Concrete in Park Work," and "Park Commissions and Administrations."

**New York State Fire Chiefs' Association.**—The fifth annual convention of the Association was held at Gloversville June 3, when the following officers were elected: President, R. A. Maxson, Gloversville; Vice President, George Sherwood, Lowville; Secretary-Treasurer, H. R. Yates, Schenectady; Directors: T. J. Sullivan, Utica, and E. J. Cooney, of Little Falls.

**The Union of Canadian Municipalities.**

—Final arrangements are being made for the eighth annual convention at Montreal, Canada, July 15-17, when the meetings will be held in the City Hall. The program is being arranged, and will be on somewhat different lines from those of previous years. Instead of having a large number of papers on the many subjects which are included in Municipal matters, it has been decided on the suggestion of President Lapointe, to select some of the most important and pressing municipal questions of the day, and devote the sessions principally to general debate upon these, in the hope of threshing them out as thoroughly as possible. This does not prevent any delegate introducing any other subject, or any municipality which is a member sending in any question which it wishes to be brought before the convention. Such extra subjects are very welcome, the object of the convention being to be of assistance to every municipality in the Dominion in working out any problems or removing any difficulties. The subjects which have been selected for the program will be introduced in a short address by a selected speaker, and the discussion will be opened by others who will be asked in advance to be ready, and then all others will be expected to take part in giving the experience of the municipality which they represent.

The subjects which will be taken up specially are as follows:

1. Board of Control, including government by commission.
2. Provincial Municipal Boards.
3. Uniform Municipal Accounting, including government supervision, sinking funds, uniform debenture forms, etc.
4. Railway Level Crossings.
5. Billboards and Advertising Monstrosities.
6. The Criminal Situation, criminals and the police, juvenile criminals, foreign criminals, the parole system.

**International Road Congress.**—President Roosevelt has directed that this nation be strongly and officially repre-



sented at the International Road Congress to be held at Paris, France, the week beginning October 11, and credentials have been issued naming Logan Waller Page, Director of the Office of Public Roads of the U. S. Department of Agriculture, Chairman of the Commission. The other members named are Colonel Charles S. Bromwell of the United States Corps of Engineers, now serving as Superintendent of Buildings and Grounds of the District of Columbia, and Clifford Richardson of New York, chemical engineer and authority on bituminous road building materials.

### Calendar of Meetings

- June 15 and July 6.  
Good Roads Congress.—First national meeting, Chicago, Ill., June 15, and Denver, Col., July 6.
- June 17.  
North West Ohio Volunteer Firemen's Association.—Thirty-fifth annual convention, Napoleon, Ohio.—J. H. Polher, Secretary.
- June 23-26.  
American Society of Civil Engineers.—Annual convention, Denver, Col.—Charles Warren Hunt, Secretary, 220 West Fifty-seventh street, New York City.
- June 23-26.  
American Society of Mechanical Engineers.—Annual convention, Detroit, Mich.—C. W. Rice, Secretary, 29 West 39th street, New York City.
- June 23-26.  
Society for the Promotion of Engineering Education.—(In connection with the convention of the American Society of Mechanical Engineers), Convention, Detroit, Mich.—A. L. Williston, Pratt Institute, Brooklyn, N. Y.
- June 23-27.  
American Society for Testing Materials.—Annual meeting, Hotel Traymore, Atlantic City, N. J.—Edgar Marburg, Secretary, University of Pennsylvania, Philadelphia, Pa.
- June 24-25.  
Indiana State Board of Health.—General Conference, Indianapolis, Ind. Dr. J. N. Hurty, Secretary.
- June 29-July 2.  
American Institute of Electrical Engineers.—Annual convention, Atlantic City, N. J.—Ralph W. Pope, Secretary, 33 West 39th St., New York City.
- July 24-25.  
American Society of Heating and Ventilating Engineers.—Summer meeting, Niagara Falls, N. Y.—W. M. Mackay, Secretary, P. O. Box 1818, New York City.
- August 10-12.  
International Acetylene Association.—Eleventh Annual Meeting, Chicago, Ill.—A. Cressy Morrison, Secretary.
- August 11-14.  
American Association of Park Superintendents.—Annual meeting, Minneapolis, Minn.—F. L. Mulford, Secretary, Harrisburg, Pa.
- August 25-28.  
International Association of Fire Engineers.—Annual convention, Columbus, O.—James McFall, Secretary, Roanoke, Va.
- September 21-October 12.  
National Association for the Study and Prevention of Tuberculosis.—International Congress, Washington, D. C.—Dr. Henry Barton Jacobs, Secretary, Baltimore, Md.—Dr. Joseph Walsh, Philadelphia, Pa. Special Secretary of the Committee on the International Congress.
- September.  
League of American Municipalities.—Twelfth annual convention, Omaha, Neb.—John MacVicar, Secretary, Des Moines, Ia.
- September.  
New Jersey State Firemen's Association.—Annual meeting, Atlantic City, N. J.—William Exall, Secretary, 11 Howard street, Newark, N. J.
- October 11.  
International Roads Congress.—First convention, Paris, France.—President Lehtier, l'Inspecteur General des Ponts et Chaussees.
- October 20-23.  
American Society of Municipal Improvements.—Fifteenth annual convention, Hotel Dennis, Atlantic City, N. J.—A. Prescott Folwell, Secretary, 511 Flatiron Building, New York City.
- November 17-20.  
National Municipal League.—Annual meeting, Pittsburgh, Pa.—Clinton Rogers Woodruff, Secretary, 705 North American Building, Philadelphia, Pa.

### PERSONALS

BADEN, C. C., Assistant Engineer, Sewer Division of the Engineer Department of the District of Columbia, for a number of years, at a salary of \$1,500, has been transferred to inspector in that department at \$4.50 per day, and the vacancy has been filled by the promotion of L. C. Randell, who was formerly an inspector at \$4.50 per day.

BURNETT, WILLIAM, Chief of the Fire Department of Des Moines, Ia., and his driver, W. M. Van Horn, were injured in a collision with a wagon while driving at full speed to a fire recently.

BUSSE, FRED A., Mayor of Chicago, Ill., was married in April to Miss Josephine Lee of that city, but the fact did not become known to even his close friends until a week or so ago.

CHAFFINCH, WILLIAM P., Mayor of Easton, Md., resigned the office after four weeks' service, because Council refused to confirm some of his appointments, notably that of his son, Laurence A. Chaffinch, for Town Clerk; Major Charles W. Adams, President of the Council, succeeds to the office.

CLAYBROOK, MAJ. JOSEPH P., City Engineer of Louisville, Ky., has resigned.

CRONIN, JOHN R., Mayor of Joliet, Ill., has renamed all department heads with the exception of Bertillon Clerk, Fred Zimmerman, being chosen to succeed Joseph McFadden.

The names sent to Council follow:  
City Engineer—H. A. Stevens.  
Water Superintendent—Charles A. Foley.  
Assistant City Attorney—Daniel R. Burke.  
Inspector of Weights and Measures—Frank Kramer.  
Bertillon Clerk—Fred Zimmerman.  
Street Superintendent—John Friedrich.  
Assistant Street Superintendent—John Kielen.  
Health Commissioner—Dr. H. G. Schuessler.

Sanitary Officer—L. A. Smith.  
City Collector—Frank Clare.  
Oil Inspector—John McGowan.  
Plumbing Inspector—Frank O'Neil.  
Two changes were made in the park boards. On the West Park Commission T. V. Brennan is named to succeed J. Stanley Brown and on the Highland Park John Bray succeeds Charles Grant.

The other members are named below:  
West Park Commission—H. J. Weber and H. F. Piepenbrin, who succeed themselves.  
Highland Park Commission—James R. Hobbs and Martin Westphal, reappointed.

D'ANCONA, DR. A. A., formerly a member of the Board of Supervisors of San Francisco, Cal., has been appointed to the Board again by Mayor Taylor to succeed Lippman Sachs, who is touring Europe and sent his resignation from Paris.

HAYMAN, E. P., of the Maryland Geological Survey, has been appointed Road Engineer of Anne Arundel County, Md.

HOOD, STEPHEN D., Chief of Police of Kingston, N. Y., since the organization of the force in 1890, died recently, aged 47 years.

LANAGAN, FRANK R., Deputy City Engineer of Auburn, N. Y., has been named as Deputy City Engineer of Albany by City Engineer Walter Melius, to succeed Harry I. Deutschbein, recently named as Superintendent of the Albany Water Works; Mr. Lanagan is but 26 years old, is a graduate of the Albany High School, class of 1901, and the Rensselaer Polytechnic Institute, Class 1905, and prior to going to Auburn was leveler and inspector at the Albany filtration plant.

LEBKUECKER, JULIUS A., Newark, N. J., and Ackerman, William S., have sailed for Europe on a six weeks' visit to some English and German cities where new sewerage systems have been installed. Both are members of the Passaic Valley Sewerage Commission.

MCCLELLAN, GEORGE B., Mayor of New York City, with Patrick F. McGowan, President of the Board of Aldermen, and Nicholas J. Hayes, Fire Commissioner, were the guests of John R. Hegeman, President of the Metropolitan Life Insurance Company, in a trip through the new building and tower of the company at Madison Square, and obtained a view of the city from the thirty-fourth floor; later they were entertained by the insurance officials at the Manhattan Club.

NORRIS, MICHAEL W., Health Commissioner of Boston, Mass., salary \$4,000, has tendered his resignation and the same has been accepted by Mayor George A. Hibbard, to take effect at once, and he sent in the nomination of John Ritchie, Jr., for the position, notwithstanding that the Board of Aldermen has once refused to confirm this appointee.

ROBINSON, CHARLES MULFORD, Rochester, N. Y., has been engaged by the new commission government of Cedar Rapids, Ia., to visit that city and report on its improvement possibilities.

SMITH, J. S., Mayor of Kosciusko, Miss., was found dead in bed by his wife who went to wake him recently, heart disease being the cause.

WING, FRANK L., Mayor of Tampa, Fla., has been reelected for a fourth term of two years.

### INCORPORATIONS

Alton Stone Co., Jerseyville, Ill.; to operate stone quarries; capital, \$6,000. Incorporators: June M. Rhodes, Robert Curdle, John C. McGrath.

American-La France Fire Engine Co. of Massachusetts, Boston, Mass.; fire apparatus; capital, \$1,000. President, William P. Chapman, Jr., New York; treasurer, Robert D. Hazzard, Everett; clerk, Samuel Hardy Mitchell, Newton Center.

Billings & Eastern Montana Power Co., Newark, N. J.; to operate by electricity or other power street and interurban railways, etc.; capital, \$1,000,000. Incorporators: Pressley E. Bisland, Bronxville, N. Y.; C. R. Ganter, 136 West Forty-fourth street, New York; Robert Randell, 139 Clinton street, Brooklyn.

Brookville Electric Co., Brookville, O.; capital, \$20,000. Incorporators: John Brodsman, Abe Bassert, M. P. Hubbard and others.

County Roads Construction Co., Port Huron, Mich.; capital, \$25,000. Incorporators: D. C. Kinch, president, and others.

Dunkirk Brick and Supply Co., Dunkirk, N. Y.; to manufacture brick, tile and cement blocks, etc.; capital, \$25,000. Incorporators: William L. Markham, Buffalo; Charles E. Whelpton, S. Marland Hamilton, T. J. Cummings, C. S. Putnam, Dunkirk.

Johnson's Laboratory, Inc., Worcester, Mass.; chemistry; capital, \$10,000. President and treasurer, George H. Johnson; clerk, Arolyn L. Johnson, both of Worcester.

Leyden Light and Power Co., Franklin Park, Ill.; capital, \$50,000. Incorporators: Arthur G. Guenther, Harry C. Godfrey and others.

Matyas Water Co., Dover, Del.; capital, \$1,000,000. Incorporators: Howard H. Nieman and Joseph W. Ebbs, 76 William street, New York; L. B. Van Pelt, 213 Ralph avenue, Brooklyn.

Poseyville Light and Power Co., Poseyville, Ind.; capital, \$10,000. Incorporators: Frank W. Seib, August Seib and others.

Randolph Granite Co., Kittery, Me.; granite; capital, \$200,000. President and clerk, J. W. Hawes, Kittery; treasurer, H. P. Knowlton, Malden, Mass.

Sanitary Utilization Co. of New Jersey, Ocean Grove, N. J.; collection, removal and disposal of garbage and ashes; capital, \$25,000. Incorporators: H. K. Buck, Raymond Wells, as above; John F. Mesler and Joseph C. Barkalow, Corlies avenue, Asbury Park; Elmore D. Blake, Asbury Park.

Universal Pure Water Co. of New Jersey, Newark, N. J.; sale, lease and rental of Roche system of filters and filtration plants for domestic use, manufacturing and municipal purposes; capital, \$10,000. Incorporators: E. B. McClellan, 311 Union Building, Newark; G. E. McClellan, 207 West Fifty-fourth street; A. C. McClellan, 34 East Thirty-second street, both of New York.

## THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

## BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>Street Improvements</b>				
Illinois	Oak Park	June 18, 9 A.M.	Constructing concrete sidewalks on number of streets.	B. C. Brandstadt, Bd. Local Imp.
New Jersey	Jersey City	June 18, 10:30 A.M.	Repairing Hudson Co. Blvd. with bit. concrete or asph. mixt.	J. C. Sweeney, Clk. Blvd. Com'rs.
Pennsylvania	Wilkes-Barre	June 18, noon	Resurfacing and repairing all sheet asphalt pavements.	Evan Challis, Joint St. Com.
Ohio	Martins Ferry	June 18, noon	Furn. neces. paving brick or block for streets and alleys.	E. D. Lash, Clk. Bd. Pub. Serv.
Ohio	Delaware	June 18, noon	Brick or asphalt paving, etc., W. Lincoln Ave.	R. M. Swickheimer, Clk. B. P. S.
Ohio	Coshocton	June 18, noon	Bldg. 6 highways; brick, macadam, etc.; \$1,000 check.	E. M. Norman, Sec'y Dist. Rd. C'mrs.
Ohio	Mt. Gilead	June 18, noon	Brick or block paving, grading, curb, etc., 2 sts.	W. F. Wieland, Village Clerk.
Ohio	Poland township	June 18, 2 P.M.	Grading and macadamizing 11,246.2 ft., Poland and Struthers road.	W. J. Maurice, Township Clerk.
Tennessee	Johnson City	June 18, 4 P.M.	Paving 21,000 sq. yds., 6,100 lin. ft. concrete curb, etc.	L. N. Wilson, City Engineer.
Connecticut	Bridgeport	June 18, 8 P.M.	Furn. 5,860 sq. yds. brick or wood block; 930 bbls. Portland cement; 720 cu. yds. sand; 1,400 tons crushed stone; 13,500 tons crushed stone, "Special"; 3,300 tons screenings, "Special"	John M. Griffin, Chm. Com. Sts. and Sidewalks.
Pennsylvania	Harrisburg	June 18	Improving 3 stretches: Jonestown road, 16 ft. wide; 3,450 ft.; 5,855 ft., and 8,350 ft. long, inc. 2 bridges.	Jos. W. Hunter, St. Hwy. Com'r.
Ohio	Struthers	June 18	Grading and macadamizing Struthers road.	W. J. Morris, Twp. Clk.
Ohio	Cincinnati	June 19, noon	Wood block paving, granite curb, grading, Josephine St.	John J. Wenner, Clk. Bd. Pub. Serv.
New Hampshire	Nashua	June 19, 5 P.M.	Grading and surfacing trap-rock portion Merrimack Val. road.	A. W. Dean, State Eng'r, Concord.
New York	Little Falls	June 19	Paving East Main St.; brick, asphalt, bitulithic.	Board of Public Works.
Pennsylvania	Bellefonte	June 19	Bldg. 7,560 ft. Osceola road, 7,507 ft. Tyrone Pike, Rush twp.; 6,044 ft. road, Harris twp., Center County.	Jos. W. Hunter, Har'sb'g, S. H. C'mr.
Dist. of Col'bia	Washington	June 20, noon	Macadam roads, asphalt block paving, etc.	Capt. H. L. Pettus, U. S. Army.
Wisconsin	Oshkosh	June 20, noon	Asphalt paving, grading, curb, etc., Jackson St.	W. A. Marden, Chm. Bd. Pub. Wks.
Pennsylvania	Wilkinsburg	June 20, 4 P.M.	Grading, curbing, paving, 4 streets.	Frease & Sperling, Boro. Eng'rs.
Pennsylvania	Butler	June 20	Constructing 15,000 ft. road, Butler twp., Butler Co.	Jos. W. Hunter, Har'sb'g, S. H. C'm.
Ohio	Warren	June 22, noon	Asphalt block paving, etc., Elm St.; vit. brick, N. Tod Av.	E. M. Milligan, City Eng.
Alabama	Selma	June 22, noon	Brick and asphalt paving, granite and comb. curb, etc., 2 sts.	Julien Smith, City Engineer.
Ohio	Cincinnati	June 22, noon	Asphalt resurfacing, etc., 4 streets.	John J. Wenner, Clk. Bd. Pub. Serv.
West Virginia	Wheeling	June 22, 2 P.M.	Macadamizing and other Co. road work, 5 streets.	T. C. Moffat, Clk. Bd. Co. Com'rs.
Indiana	Crawfordsville	June 22, 4 P.M.	Building cement walks, curbs, gutters, 2 streets.	Henry B. Hulett, City Clerk.
South Dakota	Aberdeen	June 22, 8 P.M.	Brick or asphalt paving, certain streets.	F. W. Raymond, City Auditor.
Florida	Port Dade	June 22, 8 P.M.	Constructing brick roads.	Constructing Quartermaster.
New Jersey	Port River	June 23, noon	Bldg. gravel road 3 miles long in Plumstead twp.	I. H. Cramer, Cedar Run, Eng'r.
Illinois	Taylorville	June 23, 2 P.M.	Paving 14,341 sq. yds.; curb and gutter, 10,550 lin. ft.	J. W. Dappert, City Engineer.
New York	Brooklyn	June 24, 11 A.M.	Asphalt and granite repaving on concrete and grading.	Bird S. Coler, Boro. President.
Ohio	Cadiz	June 24, noon	Brick paving, 10,427 sq. yds.	W. H. Lucas, Town Clerk.
New York	Madison Br'cks.	June 24, 2 P.M.	Bldg. 86,000 sq. ft. macadam road, resurfacing 14,500 ft. of road, bldg. 32,500 ft. concrete sidewalks.	Constructing Quartermaster.
New Jersey	Hoboken	June 24, 8 P.M.	Repairing Adams, Second and Sixth Sts. with wood block.	James H. Londrigan, City Clerk.
Indiana	Indianapolis	June 24	Constructing 4 miles of gravel road.	Albert Sahm, County Auditor.
Ohio	Rutland	June 24	Bldg. brick-paved road, 1.09 miles long; cost, \$10,202.	State Highway Dept., Pomeroy.
Indiana	Indianapolis	June 24	Bldg. gravel road, 3.97 miles long, bet. 2 Cos.	Albert Sahm, County Auditor.
Pennsylvania	Harrisburg	June 24	Bldg. 3 roads, 21,996 ft. long, in Lebanon Co.	Jos. W. Hunter, State Hwy. Com'r.
Massachusetts	Adams	June 25, 7 P.M.	Vit. brick paving, 6,900 sq. yds. on Park St.	A. K. Boom, Chm. Bd. Selectmen.
Ohio	Painesville	June 25	Constructing 2 1/2 miles of macadam road.	James C. Wonders, State Hwy. Com.
Ohio	Cincinnati	June 26, noon	Improving Blue Rock pike in Green & Colerain Co.	Fred Dreihls, Clk. Co. Com'rs.
Missouri	St. Louis	June 26	Constructing sidewalks on several streets.	W. B. Dryden, Sec'y Bd. Pub. Imp.
South Dakota	Salem	June 27	Constructing cement walks at County Court House.	C. J. Deach, County Auditor.
Ohio	Chevoit	June 29, noon	Macadamizing, curb, grading, etc., Apple Gate road.	Charles Crag, Village Clerk.
Pennsylvania	Harrisburg	June 29	Bldg. 3 roads, 31,070 ft. long, Wash'tn Co., 7,140 ft. Western.	Jos. W. Hunter, State Hwy. Com'r.
Pennsylvania	Harrisburg	June 30	Bldg. 4 roads, 25,919 ft. long in Clinton & Cambria Cos.	Jos. W. Hunter, State Hwy. Com'r.
Ohio	Ada	June 30	Constructing 8,500 sq. yds. brick paving.	Thomas J. Smull, Eng'r.
Florida	Fort Barrancas	July 1, 11 A.M.	Constructing new and resurfacing old roads.	Capt. D. W. Hand, U. S. Army.
Maine	Augusta	July 1, 6 P.M.	Improvement of public highways.	The Mayor.
Ohio	Columbus	July 1	Building cement walks, State House grounds, etc.	A. B. Critchfield, Adj't. Gen.
Pennsylvania	Pittsburg	July 1	Road improvements costing \$1,500,000.	County Controller.
Montana	Bozeman	July 2, 7:30 P.M.	Constructing 25,000 sq. yds. concrete pavement.	H. H. Holloway, City Clerk.
Ohio	Cincinnati	July 3, noon	Improving several pike roads.	Fred Dreihls, Clk. Co. Com'rs.
Indiana	Tipton	July 6, 10 A.M.	Bldg. 3 gravel roads; 13,121, 11,075 and 5,869 ft. long.	J. F. Barlow, County Auditor.
Pennsylvania	Bentleyville	July 6, 4 P.M.	Brick paving, 3,300 sq. yds.; curb, 3,500 lin. ft.; exc. 3,000 cu. yds.; 12-in. sewer, 900 ft.; 8-in., 300 ft., etc.	C. C. Hanlon, C. E., Monongahela.
Ohio	Jefferson	July 6	Building \$20,000 macadam road in Conneaut.	County Commissioners.
Indiana	Delphi	July 6	Heavy street grading, sidewalk, etc., cost, \$9,500.	W. H. Bradshaw, City Eng'r.
Ohio	Cleveland He'its	July 7, noon	Grading, sewerage and laying 6-in. water pipes in Euclid Blvd.; Compton and Highland roads; W. G. Phare, Vil. Clk.	F. A. Pease, Eng. Co. Cleveland.
Indiana	Vincennes	July 7, 2 P.M.	Bldg. gravel road; 13,110 ft. Palmyra, 14,133 ft. Johnson twp.	John T. Scott, County Auditor.
Indiana	Muncie	July 8, 10 A.M.	Constructing 4 gravel roads in Washington township.	Joseph E. Davis, County Auditor.
Indiana	Rushville	July 10	Bldg. macadamized road bet. city and White River bridge.	A. L. Stewart, County Engineer.
Ohio	Cleveland	July 15, 11 A.M.	Grading, draining and improving N. Miles Ave. and Cannon road.	A. B. Lea, County Eng'r.
<b>Water Supply</b>				
New Jersey	Trenton	June 18, noon	Boring and casing 3 artesian wells, installation of pumping apparatus for wells, etc., St. Hosp. for Insane.	I. Scott Scammell, Bd. Mgrs. Hosp. Ins.
Ohio	East Liverpool	June 18, noon	Waterpipe; 2,560 ft., 6 in.; 100 ft., 10 in.	A. S. Hughes, Clk. Bd. Pub. Serv.
Massachusetts	Springfield	June 18 2 P.M.	Constructing covered masonry reservoir with gate houses, etc., cont. No. 3 L. R. W. S., in Agawan, 5 miles away, reservoir to cover 92,000 sq. ft., 26 ft. deep.	C. H. Bennett, Chm. Bd. Wat. Com.
Illinois	Berwyn	June 18, 8 P.M.	Furn. and laying water mains and supply pipes; cost, \$88,208.65.	Geo. H. Murphy, Pres. Bd. Local Imp.
Ohio	Newark	June 20, noon	Constructing water works system for city.	Albert C. Gundlach, Clk. B. P. S.
Texas	Stratford	June 20	Complete installation of water works system, inc. well, reservoir, mains, water plugs, etc.; cost \$10,000.	J. R. Reeder, Mayor.
Texas	Dallas	June 22, noon	Furn. three 300-h. p. boilers for new w. w. plant.	J. B. Winslett, City Secretary.
Wisconsin	West Allis	June 22, noon	Furn. and laying water mains, portions 13 sts.	F. P. Phillips, Jr., Chm. B. P. W.
North Carolina	Shelby	June 22	Constructing water works and sewers.	J. F. Riddy, City Clerk.
Wisconsin	Bruce	June 21, 8 P.M.	Constructing complete water works and light plant.	O. Clausen, Civ. Am. Bk. Bldg. St. Paul.
New York	Schenectady	June 24, 2:30 P.M.	Machinery and fittings of Ferry St. pumping station, inc. one low-duty Deane and 2 high-duty Gaskill pumps, etc.; also 4 return tubular boilers.	H. F. Miller, Secy. Bd. C. & S.



## Water Supply—Continued

South Carolina.	Lancaster.....	June 24.....	Furn. materials and constructing water works, inc. 346 tons 6 and 8-in. C. I. pipe; 36 fire hydrants; horizontal duplex engines and tubular boilers; elec.-driven turbine pumps and erecting steel tower and tank.....	Jaudon & Goss, Savannah, Ga., C. E. S. A. Freshney, Bd. Pub. Wks. Jay J. Morrow, Eng'r Com'r.
Michigan.....	Grand Rapids...	June 25, 8 P.M.....	Furn. 12,000,000-gal. pump; cost, \$80,000.....	
Dist. of Col'bia.	Washington.....	June 27, noon.....	Furnishing curb and corporation cocks.....	
Pennsylvania...	Pittsburg.....	June 29, 10 A.M.....	Constructing filters, pipe gallery, conduits, piping, fixtures, etc., in O'Hara tp., for city of Pittsburg.....	Morris Knowles, Chief Eng'r. Xavier A. Kramer, Magnolia, C. E. N. K. Thompson, Street Com'r. Harry J. McDargh, Dayton, C. E.
Mississippi.....	Columbia.....	June 30, 3 P.M.....	Constructing complete water works system.....	Water Committee.
New Jersey.....	Elizabeth.....	July 1, 8 P.M.....	Constructing a pumping station.....	Reynold Voit, Secy Bd. Pub. Serv.
Ohio.....	Lewisburg.....	July 1.....	Bldg. water and light system; operated by gasoline, \$25,000.....	Park Woodward, Gen. Mgr. Water Bd.
Illinois.....	Batavia.....	July 6.....	Furn. material and laying 17,000 ft., c. i. water mains, 18 hydrants, valves, boxes, etc.....	Fred. Gelinis, Sec'y Dept. Pub. Wks.
Ohio.....	Toledo.....	July 7, noon.....	Labor and mat. for concrete intake pier, pipe, gate house, etc., for Toledo filtration works, 2-mile co. c. conduit, \$200,000.....	R. R. McCormick, Pres. Sanitary Dis.
Georgia.....	Atlanta.....	July 8, 4 P.M.....	Three 300 h. p. horiz. water tube boilers, 200 lbs. pressure, erected, bricked in, on found. furn. by city.....	M. J. Daeger, Town Clerk.
Ontario.....	Ottawa.....	July 8, 4:30 P.M.....	Constructing a movable dam at St. Andrews Rapids.....	H. B. Rice, Mayor.
Illinois.....	Chicago.....	July 8.....	Furnishing centrifugal pumps, induction motors, high pressure unit, lead covered cable.....	H. B. Ferris, Bd. Pub. Wks.
Iowa.....	Templeton.....	July 20.....	Constructing water system; extra foun., June 6.....	
Texas.....	Houston.....	July 27, 3 P.M.....	Erecting 15,000,000-gal. pumping engine with plans, etc.....	
California.....	Los Angeles.....	July 27.....	Bldg. Jawbone div. Los Angeles aqueduct, cap. 400 second ft., inc. 43,000 lin. ft. lined tunnel; 60,000 ft. lined conduit; 340,000 cu. yds. excavation, etc.....	

## Sewerage

Illinois.....	Chicago.....	June 18, 10:30 A.M.....	Bldg. tile and brick sewers; also bldg. drains.....	C. A. V. Standish, Secy. B. L. Imp.
Ohio.....	Cleveland.....	June 18, noon.....	Constructing sewers in various sts. and aves.....	A. R. Callow, Secy. Bd. Pub. Serv.
New Jersey.....	Riverton.....	June 18, 8 P.M.....	Mat. and labor for single-ring 36-in. brick culvert, rein. with 14-in. cement coating, 1,740 ft. long, etc.....	H. S. Haines, Temple Bldg., Camden, C. E.
Massachusetts..	Boston.....	June 19, 2:30 P.M.....	Bldg. 42-in concrete and 12-in. pipe sewers.....	Wm. M. Brown, Ch. Engr. Met. W. & S. Bd.
Wisconsin.....	Oshkosh.....	June 20, noon.....	Bldg. sewers, Mt. Vernon St., Harris and Central Aves.....	W. A. Marden, Bd. Pub. Wks.
Pennsylvania...	Chartiers tp.....	June 22, noon.....	Constructing sewers, etc., in 11 aves. and alleys.....	Trimble & Miller, 435 Fourth av., Pittsburg, Eng'rs.
Iowa.....	Davenport.....	June 22, 2 P.M.....	Constructing sewer in alley bet. 9th and 10 Sts.....	Thomas Murray, City Eng'r.
New Jersey.....	East Rutherford.	June 22, 8 P.M.....	Bldg. 14 1/2 miles 8 to 24-in pipe; also 6-in. pipe for house connections and two disposal plants.....	Chas. B. Johnson, Boro Clerk.
North Carolina.	Shelby.....	June 22.....	Constructing sewer system.....	J. F. Tiddy, City Clerk.
Kentucky.....	Louisville.....	June 24, noon.....	Bldg. Sec. A 25th St. sewer cont. 8' rein. concrete, 1,993 ft. 5' 10"x5' 6 1/2", 1,740 ft. 5' 6"x5' 2", inc. con. chamber; 3,762 lin. ft. exc. 14 to 24 ft. deep; 1,750 cu. yds. concrete; 92,000 lbs. rein. steel bars.....	J. B. F. Breed, Ch. Eng'r Sewer Com.
Kansas.....	Newton.....	June 25, 7:30 P.M.....	Bldg. main sewers, lateral, purification tank, Dist. No. 1.....	Adella Martin, City Clerk.
Dist. of Col'bia.	Washington.....	June 29, noon.....	Constructing a trunk sewer.....	Jay J. Morrow, Eng'r Com'r.
Indiana.....	Butler.....	June 29.....	Bldg. 4 miles vit. lateral sewers, inc. manholes, etc.....	George L. Rowe, Pres. of Council.
Louisiana.....	New Orleans.....	June 30, 3 P.M.....	Furn. and erecting two 100 k.w., 250 volt., dir. con. generators; two 75 h.p., 250 volt motors; one 2,500,000-gal. turbine pump and 1,000,000-gal. triplex pump, to work against 125-ft. head, dir. con. to electric motor; 2,000,000 cen. pump; two 4,000,000 cen. pump units; two 5 h.p. 250 volt motors; one surface condenser, 6,500 lbs. steam per hr.; air pump; piping, valves, wiring, switchboard, etc.....	George G. Earl, Gen. Supt. S. & W. Bd.
Mississippi.....	Columbia.....	June 30, 3 P.M.....	Constructing complete sewer system for city.....	Xavier A. Kramer, Magnolia, C. E.
Virginia.....	Portsmouth.....	June 30.....	Bldg. sewers, 5th Ward; add to pump. sta., cost, \$110,000.....	Bascom Sykes, City Engineer.
New York.....	Waterloo.....	July 1, noon.....	Furn. mat. and bldg. sewer system; inc. 14 miles 6 to 20-in. vit. pipe, 4 to 16 ft. trench, with manholes, flush tanks, river crossing and septic tank; bids sep. or comb. for sewers and septic tank.....	Morrison & Farrington, Syracuse, C. E.
New Jersey.....	Elizabeth.....	July 1, 8 P.M.....	Bldg. intercepting sewer, inc. 12,000 ft. 28 to 44-in. brick sewer, 8 to 25 ft. deep; 4,000 ft. 10-15-in. pipe, 11 to 25 ft. deep; 15,000 cu. yds. rock exc.; 70 manholes, pumping plant, cap. 5,000 gals. per minute.....	W. H. Luster, Jr., City Surv.
New Jersey.....	Avalon.....	July 2.....	Constructing portion of sewer system; cost, \$8,000.....	R. L. Goff, Ocean City, Eng'r.
New Jersey.....	Plainfield.....	July 6, 8 P.M.....	Bldg. sanitary sewers, inc. 710 ft. 8-in. vit. pipe, 6-8 ft. deep; 36 ft. 8-in. c. i. pipe 100 ft. 4-in. vit. house con.; 34 branches, etc.....	Andrew J. Gavett, City Surveyor.
North Carolina.	Shelby.....	July 22.....	Constructing sewer and waterworks.....	J. P. Riddy, City Clerk.

## Public Buildings

Pennsylvania..	Wilkes-Barre...	June 18, 10 A.M.....	Additions and alterations to Almhouse at Retreat.....	Thos. Cassidy, Sec'y, 20 N. Frank St.
Ohio.....	Athens.....	June 18, noon.....	Bldg. south wing Normal College; also gym. bldg. and heating plant.....	I. M. Foster, Sec'y, Ohio Univ.
Texas.....	Houston.....	June 18, 3 P.M.....	Constructing Federal Building.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Milwaukee.....	June 18.....	Bldg. additions to No. 3 school.....	F. M. Harbach, Sec'y Sch. Dirs.
Ohio.....	Orrville.....	June 19, noon.....	Bldg. 4-room school; Harpster & Bliss, Akron, Archts.....	E. E. Clark, Clk. Bd. Educ'n.
Iowa.....	Council Bluffs...	June 19, 1 P.M.....	Building school, Sec. 18, Hardin township.....	J. A. Price, Sec'y School Bd.
Indiana.....	Bluffton.....	June 19, 1:30 P.M.....	Building 1-story cement block school and 2 out-houses, Union tp.....	Charles Houck, Architect.
Ohio.....	Butler.....	June 20, noon.....	Bldg. school house in Butler township.....	P. S. White, Clk. Bd. Educ'n.
Ohio.....	Canton.....	June 20, noon.....	Bldg. school in Sub-dist. No. 2, Tuscarawas twp.....	Clk. Bd. of Education.
New Jersey.....	Roselle.....	June 20, 8 P.M.....	Bldg. 3-story and base. brick and stone school, 140 x 72 ft.....	Pierce & Bickford, Elmira, N. Y., Arts.
New York.....	New York.....	June 22, 11 A.M.....	Gen. construction, alterations, etc. various school bldgs.....	C. B. J. Snyder, Supt. School Bldgs.
Ohio.....	Findlay.....	June 22, noon.....	Bldg. 2 connected brick cottages on Infirmary Farm.....	John A. Sutton, Archt., Hancock Co.
Dist. of Col'bia.	Washington.....	June 22, 2 P.M.....	Remodeling plumbing at Govt. Hospital for Insane.....	Frank Pierce, Act. Sec'y Int. Dept.
Utah.....	Provo.....	June 22, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Saskatchewan..	Regina.....	June 22, 4:30 P.M.....	Erecting Legis. & Executive bldgs. for Province.....	F. J. Robinson, Dept. Com'r Pub. W.
New York.....	Albany.....	June 22.....	Erecting State Education Bldg. on Washington St.....	Trus. of Pub. Bldg's, Capitol.
Indiana.....	Broad Ripple...	June 23, 11 A.M.....	Building brick school Central Ave. and 46th St.....	Advisory Bd., Washington twp.
Arkansas.....	Fayetteville...	June 24, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
California.....	Riverside.....	June 24.....	Bldg. addition to Co. jail; cost, about \$6,000.....	County Supervisors.
Massachusetts..	Great Barrington.	June 24.....	Bldg. 12-room school at Housatonic.....	Chas. Giddings, Sec'y Bldg. Com.
Indiana.....	Elwood.....	June 24.....	Building 2-room school, 68 x 34 ft.; Chas. R. Kaufman, Audsn., Architect.....	O. H. Stokers, School Trustee.
Nebraska.....	Beatrice.....	June 25, noon.....	Building high school; R. W. Grant, Architect.....	W. W. Duncan, Chm. School Com. G. & B.
Ohio.....	Mt. Vernon.....	June 25, noon.....	Erecting, etc., 7 buildings at Ohio State Sanatorium.....	Frank L. Parkard, Columbus, Arch.
Texas.....	Greenville.....	June 25, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Oregon.....	Portland.....	June 25.....	Plans for \$250,000 high school.....	Board of Education.
Pennsylvania...	Westland.....	June 25.....	Erecting school for Mt. Pleasant township.....	J. C. Luyten, Architect.
Illinois.....	Meredosia.....	June 25.....	Constructing City Hall.....	R. L. Estes, Chm. Bldg. Com.
New York.....	Auburn.....	June 25.....	Erecting high school and grammar school building.....	Board of Education.
Indiana.....	Indianapolis.....	June 26, noon.....	Addition to Manual Training building, heating, etc.....	John E. Cleland, Bus. Dir. Sch. Com.
New York.....	Canandaigua.....	June 27, 10 A.M.....	Alterations, additions, etc., Co. Court House; \$75,000.....	Foster Warner, Granite bldg., Roch.
Ohio.....	West Milton.....	June 29, noon.....	Bldg. 12-room school, Elmer L. Gerber, Dayton, Arch.....	Rudolph King, Clk., Bd. Educ.
Ohio.....	Massillon.....	June 29, noon.....	Bldg. 3-story City Hall, 70 x 120 ft.....	J. M. Bostick, Canton, Arch.
South Carolina.	Sumter.....	June 29, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Pennsylvania...	Meadville.....	June 30, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Wautoma.....	June 30, 6 P.M.....	Erecting jail and sheriff's residence for Waushara Co.....	W. B. Stilwell, County Clerk.
Oregon.....	Portland.....	June 30.....	Plans, \$250,000 high school; prices, \$1,000, \$500, \$300, \$200.....	Board of Education.
Ohio.....	Lancaster.....	July 1, noon.....	Erecting and equipping a municipal hospital.....	Geo. Cunningham, Clk. Bd. Pub. Ser.
Tennessee.....	Memphis.....	July 1, noon.....	Furn. steel fixtures, furniture, etc., Co. Court House.....	Hale & Rodgers, N. Y. City, Archs.
Kansas.....	Salina.....	July 1, 2 P.M.....	Erecting high school building.....	R. P. Cravens, Pres. Bd. Educ.
Maryland.....	Baltimore.....	July 1, 3 P.M.....	Bldg. and mech. equipment, extension to Federal Bldg.....	James Knox Taylor, Wash., D. C.
Dist. of Col'bia.	Washington.....	July 2, 2 P.M.....	Erecting assembly hall, Govt. Hosp. for Insane.....	Frank Pierce, Act. Sec'y, Int. Dept.
Tennessee.....	Columbia.....	July 2, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
California.....	San José.....	July 6, 11 A.M.....	Constructing a Hall of Justice.....	Ray Walter, City Clerk.
Georgia.....	Marietta.....	July 6, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.

## Public Buildings—Continued

Kansas.....	Iola.....	July 7, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Georgia.....	Douglasville.....	July 7.....	Erecting \$15,000 school building.	The Mayor.
Georgia.....	Brunswick.....	July 8.....	Prelim. plans, etc., for \$30,000 high school, complete.	N. H. Ballard, Sec'y Bd. Educ.
Ohio.....	Springfield.....	July 9, 3 P.M.	Constructing extension to U. S. Post Office.	James Knox Taylor, Wash., D. C.
Illinois.....	Chicago.....	July 14, 11 A.M.	Wrecking, exc. and caissons for new City Hall.	Holabird & Roche, Monadn. Bldk. Architects.
Pennsylvania.....	Sharon.....	July 14, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Georgia.....	Valdosta.....	July 15, 3 P.M.	Constructing, complete, Federal Building.	James Knox Taylor, Wash., D. C.
Maine.....	Auburn.....	July 20, 3 P.M.	Constructing, complete, U. S. Post-office.	James Knox Taylor, Wash., D. C.
Wisconsin.....	Rhineland.....	July 20.....	Constructing 3-story Court House; cost, \$100,000; stone, fire-proof construction, 120x95 ft. A. Taylor, Chm. Co. Com'rs.	C. H. Tegen, Manitowoc, Arch.
Michigan.....	Coldwater.....	July 21, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Tennessee.....	Paris.....	July 22, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Minnesota.....	St. Paul.....	August 1.....	Competitive plans for Mechanical Arts High School, 62 rooms; Architects all over country invited to submit plans.	Com. on Schools, School Bd.

## Bridges

Indiana.....	Portland.....	June 18.....	Bldg. 6 steel bridges, 18 to 140 ft. long, using concrete abutments also 2 concrete arches.	W. H. Badders, County Surveyor.
Texas.....	Lufkin.....	June 19, 9 A.M.	Building three iron bridges.	T. W. Jordan, County Judge.
Ohio.....	Paulding.....	June 19, 2 P.M.	Constructing bridges in various townships.	Floyd Atwill, County Auditor.
Illinois.....	Chicago.....	June 20, 11 A.M.	Bldg. super. bascule bridge at Erie st.; also substructure.	John J. Hanberg, Com'r Pub. Wks.
Dist. of Col'bia.....	Washington.....	June 20, noon	Installing electro-magnetic brakes on Anacostia bridge.	Jay J. Morrow, Eng'r Com'r.
Tennessee.....	Clinton.....	June 20, noon	Bldg. concrete arch culvert on Depot St.	J. K. P. Wallace, Chm. Co. Pike Com.
Ohio.....	Youngstown.....	June 22, 11 A.M.	Sub and superstructure, approaches, etc., at bridge.	Will B. Jones, County Auditor.
Ohio.....	Uhricksville.....	June 22.....	Bldg. 2-span concrete bridge over Stillwater Creek.	C. J. Kniseley, Eng'r, Co. Com'rs.
Minnesota.....	Crookston.....	June 23, 10 A.M.	Bldg. 32 and 70-ft. span steel bridges with plans, etc.	N. S. Hoffard, County Auditor.
North Dakota.....	South Heart.....	June 23.....	Bldg. steel bridge, 60 ft. span, steel legs, 16-ft. rdwy.	J. S. White, County Auditor.
Michigan.....	Saginaw.....	June 23.....	Bldg. steel or rein. concrete sub and superstructure of rine 90 ft. spans; 4 over river; 5 over channels, 20 ft. r'dway.	J. W. Edderer, Co. Rd. Com'r.
Ohio.....	Troy.....	June 24, 10 A.M.	Bldg. concrete abutments, levee, new channel, etc.	H. J. Walker, County Engineer.
Indiana.....	Goshen.....	June 24.....	Constructing 24 bridges.	County Commissioners.
Ohio.....	Dayton.....	June 25, 11 A.M.	Bldg. hand hoist bridge over canal at Miamisburg; 40-ft. waterway; 10-ft. rdwy.; two 6-ft. walks, etc.	H. R. Klepinger, County Eng'r.
Michigan.....	Muskegon.....	June 25, noon	Bldg. 3 bridges; bidder to furnish plans, etc.; one 1,000 ft. long, 200 and 100 ft., 18 and 16 ft. r'ways.	T. B. Crocker, Secy. Bd. Co. Superv.
Ohio.....	Cincinnati.....	June 26, noon	Steel superstructure, bridge Symes twp., Spec. 745.	Stanley Struble, County Com'r.
South Dakota.....	Mitchell.....	June 26.....	Bldg. 5 bridges; 70 and 60 ft. steel bridges on cement abutments; 40 ft. steel on steel legs; truss bridge on cement; 16 ft. long pile bridge.	H. B. Anderson, County Auditor.
Ohio.....	West Union.....	June 27, noon	Bldg. bridge over small creek, Sprigg tp.	Gleason Grimes, Township Clerk.
Ohio.....	Findlay.....	June 27, noon	Bldg. sub structure of steel bridge over Blanchard River.	John A. Sutton, County Auditor.
Ohio.....	Zanesville.....	June 29, noon	Repaving 450 ft. span suspension bridge over Muskingum River at Dresden by renewing both trusses, floor system, etc.	L. E. Bretsford, County Auditor.
Virginia.....	Norfolk.....	June 30, noon	Bldg. rein. concrete bridge, 100 ft. long, 52 ft. wide.	W. T. Brooke, City Engineer.
Ohio.....	Cleveland.....	July 1, 11 A.M.	Bldg. concrete arch, Broadview rd., Parma tp.; \$3,522.	A. B. Lea, County Engineer.
Ohio.....	Dayton.....	July 1.....	Bldg. concrete-steel bridge over Gt. Miami River.	F. J. Collariis, City Engineer.
Ohio.....	Cincinnati.....	July 3.....	Bldg. new abutment and replacing bridge and ap. Fowlers Cros.	Stanley Struble, Pres. Co. Com'r.
Indiana.....	Delphi.....	July 6.....	Bldg. 50-ft. span bridge, grading, etc., cost, \$9,500.	W. H. Bradshaw, City Engineer.
California.....	Yreka.....	July 7, noon	Bldg. 220 ft. span steel bridge over Klamath River near Scott Bar; also 100 ft. steel span at Sawyers Bar.	W. J. Neilon, County Clerk.
California.....	Eureka.....	July 8, 10 A.M.	Bldg. steel hwy. bridge over S. Fork at Garberville, inc. main span 266 ft. long, 247 ft. south and 38 ft. north app.; 16 ft. wide.	Geo. W. Cousins, County Clerk.
Indiana.....	Connersville.....	July 10, 10 A.M.	Bldg. 75-ft. concrete arch bridge with 45-ft. rdwy. over White Water River, and constructing fills.	J. L. Kennedy, County Auditor.

## Lighting and Electricity

Dist. of Col'bia.....	Washington.....	June 18, 2 P.M.	Furn. and install. dynamos and engines, etc., Mus. Bldg.	Bernard R. Green, Supt. Constr.
Ontario.....	Listowel.....	June 18.....	Complete lighting equipment, 200 h.p. cap., inc. gas producers and engines, boilers, etc., generator, switchboard, etc.	Town Council.
Oregon.....	Chemawa.....	June 19, 2 P.M.	Install. boiler, extend. power house; bldg. chimney.	E. L. Chalcraft, Supt. Ind. Sch.
Idaho.....	Minidoka.....	June 19.....	Furn. elec. apparatus for irrigation project; estimate, \$55,000 for immediate purchase, \$100,000 optional.	O. H. Ensign, Ch. Elec. Eng., 25 Carroll Bldk., Madison, Wis.
New York.....	Geneva.....	June 20, 10 A.M.	Gas engine, dynamo and switchboard; electric wiring, pole line and con.; motors for State Agricultural Experiment Sta.	F. B. Ware, State Arch., Albany.
Dist. of Col'bia.....	Washington.....	June 22, 10:30 A.M.	Furn. air motor generator, blasting sets, pneu. hoists, etc.	Purch. Agt., Isth. Canal Com'n.
Washington.....	Spokane.....	June 23, 3 P.M.	Install. conduit and wiring system, Federal Bldg.	James Knox Taylor, Wash., D. C.
Louisiana.....	New Orleans.....	June 30, 3 P.M.	Electrical and pumping machinery, Algiers station.	F. S. Shields, Sec'y S. & W. Bd.
Massachusetts.....	Boston.....	July 1, noon	Lighting with gas and naphtha incandescent mantle burners on certain streets, parks and alleys, for 5 yrs., from Aug. 1.	Guy C. Emerson, Supt. Streets.
Tennessee.....	Memphis.....	July 1, noon	Fire alarm system, electric clock system, etc., Co. C. H.	Hale & Rogers, N. Y. City, Archts.
Mississippi.....	University.....	July 1.....	Bldg. \$35,200 steam power plant, inc. dynamos, overhead wire, underground conduits and other machinery.	F. G. Proutt, Memphis, Tenn., C. E.
Ohio.....	Lewisburg.....	July 1.....	Bldg. electric light and water system; oper. by gasoline.	Harry J. McDargh, Dayton, C. E.
North Dakota.....	Valley City.....	July 6, 8 P.M.	Sale of city's electric light plant, \$40,000 or over; exclusive 20-year franchise to successful bidder.	H. F. Halverson, City Auditor.
Dist. of Col'bia.....	Washington.....	July 15.....	Furn. 20 miles, type 44, intern. single-conductor cable, spec. 419; 30 miles, type 45, deep sea cable, sing.-cond., spec. 420; 5 miles, type 46, light double armor, single conductor cable, spec. 421.	Chief Signal Officer, U. S. Army.
Ontario.....	Toronto.....	July 15.....	Bldg. steel trans. towers, line cable and system from Niagara Falls to Toronto and St. Thomas for Hydro-Elec. Power Com.	Adam Beck, Chm. Hy-Elec. Pow. Co.
Pennsylvania.....	Wilkes-Barre.....	July 23, noon	Lighting certain sts. with electric arc lights for 3, 5 and 7-yr. terms, from July 1, 1909; \$5,000 check with bid.	R. H. Richards, Chm. St. Ltg. Com.
Montana.....	Townsend.....	August 1.....	Bldg. 600 h.p. electric plant on Deep Creek for lighting city and operating mines; cost, \$85,000.	C. Hebrinch, Helena, Eng'r.

## Miscellaneous

New York.....	New York.....	June 18, 3 P.M.	Furn. 12-ton, 3-wheel steam road roller.	Henry Smith, Pres. Park Bd.
Massachusetts.....	Vineyard Haven.....	June 19, 2 P.M.	Furn. and placing in position 7,000 to 8,000 tons granite quarry grout to build extension to breakwater, Martha's Vineyard.	Harbor and Land Com'rs, Boston.
Ohio.....	Toledo.....	June 19.....	Erecting iron fire escapes and towers, 10 school buildings.	Geo. L. McKesson, Bd. Educ.
Connecticut.....	Hartford.....	June 22, 11 A.M.	Furn. 2-horse comb. chem. hose wagon, rubber tires, carry 1,000 ft. hose, one 35 or two 30-gal. chem. tanks.	J. P. Berry, Sec'y Bd. C. & S.
Michigan.....	Detroit.....	June 23, noon	Removing obstruction in Detroit River, foot Orleans St.	Benj. F. Gurney, Sec'y Water Com'rs.
Ohio.....	Portsmouth.....	June 23, noon	Bldg. retaining wall, 4,100 ft. long, concrete or rein. concrete, with wing, connecting and terminal walls.	M. W. McMahon, Clk. Bd. Pub. Serv.
Dist. of Col'bia.....	Washington.....	June 23, noon	Furn. 4th size, 2d size and chemical engine, 2 comb. chem. and hose wagons, 65 ft. aerial hook and ladder truck.	H. B. F. Macfarland, Com'r.
Ohio.....	Columbus.....	June 23.....	Rebldg. dam, St. Marv's works, etc.; total cost, \$261,000.	Chas. E. Porkins, Ch. Erg. Pub. Wks.
Ohio.....	Columbus.....	June 24, noon	Bldg. disposal plant for garbage and dead animals.	Henry Maetzel, Ch. Eng'r B. P. S.
Dist. of Col'bia.....	Washington.....	June 24, noon	Furn. Portland cement, sand, broken stone, gravel and reinforcing steel.	Lt. E. J. Dent, Eng'r Corps, U.S.A.
Pennsylvania.....	Scranton.....	June 24.....	Furn. 3,000 ft. 2 1/2-in. cotton, rubber-lined fire hose, in 50-ft. sections; also rebuilding fire engine No. 26.	F. L. Wormser, Dir. Pub. Safety.
Alabama.....	Riverton.....	June 27, 11 A.M.	Constructing concrete river wall, Colbert Shoals Canal.	Maj. Wm. W. Harts, Nash., Tenn.
Iowa.....	Muscatine.....	June 29, 1 P.M.	Constructing underground tunnel.	A. S. Lawrence, County Auditor.
Iowa.....	Sioux City.....	June 29, 4 P.M.	Bldg. 19 new fire escapes to public school bldgs.	Reineck & Jenkinson, Archts.
Pennsylvania.....	Harrisburg.....	June 30, 5 P.M.	Furn. and bldg. garbage and refuse disposal plant, consisting of one battery for refuse from 500 people, at Mont Alto.	State Commissioner of Health.
Tennessee.....	Memphis.....	July 1.....	Fire alarm system and repairs at Court House.	John Colbert, Sec'y, Shelby Co. Com.
West Virginia.....	Saltpetre.....	July 2, 2 P.M.	Building dam at lock No. 1, Tug Fork, Big Sandy River.	Col. J. G. Warren, U. S. Eng'rs, Cincinnati.
Massachusetts.....	Boston.....	July 6, 2:30 P.M.	Furn. and install. piping at lock in Charles River dam.	Charles River Basin Com'n.
Manitoba.....	Winnipeg.....	July 8.....	Constructing movable dam, steel service and highway bridge, repair shop, etc., at St. Andrews Rapids, Red River.	Fred. Geliras, Ottawa, Ont., D. P. W.



## STREET IMPROVEMENTS

**Alexander City, Ala.**—The question of better roads for this county and State are now being discussed; Senator John W. Overton is interested.

**Ensley, Ala.**—Plans are under way for a new boulevard from Owenton to this place.

**Montgomery, Ala.**—H. E. Reynolds of Centerville can be addressed for further information regarding good roads for this section.

**Redlands, Cal.**—The Redlands Board of Trade is in favor of a new county road into Mill Creek Canyon.

**Southington, Conn.**—At the monthly meeting of the Board of Warden and Burgesses the Finance Committee reported that the cost of macadamizing Eden avenue and Bristol street would be about \$9,000.

**Stratford, Conn.**—Proposals are being received for the construction of a section of road in this town.—Address L. H. Wellis or L. J. Wakeley.

**Washington, D. C.**—The grading for which the government is considering bids is preliminary to the paving, curbing and guttering of Grant avenue, for which James Stanton has already been awarded the contract; the grading to be done will require 8,000 yards of fill and 15,000 yards of cut; this work will cost about \$16,800; the entire road, when completed, will cost \$90,000.

**Ocala, Fla.**—The question of better roads for this section is now discussed.—Address City Council.

**Tampa, Fla.**—Improvements to roads in this county are being discussed.—Address County Engineer Benjamin Thompson.

**Albany, Ga.**—A special election was held in Dougherty County recently, when \$30,000 bonds were authorized for the purpose of improving the roads throughout this section.

**Cedartown, Ga.**—The citizens have voted \$30,000 bonds for sewers and street improvements.

**Lewiston, Ida.**—Council will shortly let a contract for paving with treated wooden blocks.

**Wallace, Ida.**—The County Commissioners have rejected all bids for the construction of the Slate Creek wagon road, to connect Wallace with the St. Joe River.

**Chicago, Ill.**—Plans for a broad surface boulevard have been presented by the Michigan Avenue Improvement Association.

**Galena, Ill.**—Former Street Commissioner John Bastian has secured the contract to do the paving on Upper Main and Bench streets, and he is trying to secure new style of paving block for the work.

**Flora, Ind.**—The Town Council has passed an ordinance for paving Center, Walnut, Main and Columbia streets.

**Kokomo, Ind.**—Work will soon be commenced on new roads in Harrison township; the roads are to be constructed as soon as possible.

**Columbus, Ind.**—The Commissioners of Bartholomew County have passed favorably on petitions for the construction of ten gravel roads estimated to cost \$103,499.

**South Bend, Ind.**—The Board of Public Works have adopted resolutions, declaring in favor of the following improvements:

Grading of East Division street from Notre Dame street to Frances street; grade, curb and walk on Carroll street, from Calvert street to the first alley south; grade, curb and walk on Baker street, from Adams street to the first alley east; pipe sewer on Fisher street, from Webster street to the alley east of Union street; pipe sewer on Diamond avenue, from Michigan avenue to Laporte avenue; pipe sewer on Miller court, from Osborne street to Sample street; pipe sewer on Wayne street, from St. Peter street to Notre Dame street; brick pavement on the alley west of Franklin street, from Jefferson street to Division street; brick pavement on Wood street, from Michigan avenue to Marion street, and brick pavement on the alley west of Lafayette street, from Wayne street to Monroe street. A hearing will be given to interested property owners on the above improvements June 23.

**Des Moines, Ia.**—Council has adopted a resolution for brick pavement on East Court street.

**Lovington, Ky.**—Engineer Alexander of Decatur is making surveys for paving streets.

**Muscataine, Ia.**—Council will look up the matter of paving improvements to be made to District No. 25; the streets to be paved are Second street, from Cypress to Smalley avenue; Third street, from Mulberry to Oak street; Fourth street, from Mulberry to Poplar; Sixth street, from Sycamore to Mulberry avenue, and several other near-by streets.

**New Orleans, La.**—Preliminary arrangements are being made for paving of Tulane avenue, from the lake side of Hagan avenue to the river side of Carrollton avenue, with granitoid concrete pavement.

**Baltimore, Md.**—Commissioners for Opening Streets have completed specifications for paving Twenty-fourth street, between Charles street and Maryland avenue, with bituminous concrete.

**Cumberland, Md.**—At a recent meeting of the State Highway Commission it was decided to spend \$175,000 for the rebuilding of the old national pike and the old Cumberland road.

**Frederick, Md.**—Plans are under way for the construction of a new State road from Washington Pike at Olney and the Hanover pike at Westminster, from Washington, nearly to Gettysburg, Pa.

**Amesbury, Mass.**—Plans are under discussion for improvements to State highway.

**Amherst, Mass.**—Mr. Hosmer stated that \$50,000 has been petitioned for State highways in Berkshire County.

**Chelsea, Mass.**—Notices have been given by the Board of Control regarding a hearing to be held on June 25 for the widening of Everett avenue from 50 to 60 feet, by takings on the lower side and the extension of West Third street. The Board will expend about \$50,000 in grading unsanitary land.

**Leominster, Mass.**—An article is contained in the town warrant to see if the citizens will vote to appropriate \$5,000 to macadamize Central street from the bridge over the Monosnock brook to the end of the State road on Central street.

**Marlboro, Mass.**—\$3,500 has been appropriated for improvement of State road, from Hudson to this town; Mayor Henry Parsons can be addressed.

**Ware, Mass.**—A new State road is to be built here at a cost estimated at about \$19,000, to extend through the town for about two miles.

**Worcester, Mass.**—The Middle River boulevard was discussed recently; Mayor James Logan is interested in plan which is under way to connect Quinsigamond at Taylor street and Holmes street, South Worcester, making a driveway about two miles long.

**Cadillac, Mich.**—Council has passed a resolution to borrow \$37,000, with which to pay for the paving to be done this summer on North Mitchell, South Mitchell, Chapin, Cass, Harris, West Mason and West Pine streets.

**Grand Rapids, Mich.**—Approximate estimates were submitted by the City Engineer as follows: Grading and graveling Eleventh street, from Jeannette to West street, \$13,300; Buchanan street, brick paving, from Wealthy to Prescott, \$4,516; grading and graveling Bradford street, from North Lafayette to North College, \$12,080; sewer in Bradford street, \$4,077; grading and graveling West street, from Bridge street to Fourth street, \$8,230.

The specifications for the grading and graveling of Lowell avenue, from East Fulton street to Lyon street, was held up temporarily.

**Grand Rapids, Mich.**—The Board of Public Works will furnish Council with the estimate of the cost of grading and paving with brick on a concrete base Cannal alley.

**Owosso, Mich.**—Council has ordered the paving of Michigan avenue.

**Belgrade, Minn.**—Proposals will be received June 20 for \$4,000 road bonds, bearing interest at the rate of 6 per cent.—Wm. Peterson, Town Clerk.

**Bemidji, Minn.**—It is planned to raise \$50,000 by special bond issue for improvements to roads through the county.

**Jefferson City, Mo.**—Three new miles of road are to be constructed east from this city.

**Kansas City, Mo.**—Brook street, from Twenty-fourth street north, is to be widened and paved with vitrified brick.

**Bozeman, Mont.**—Main street property owners have received a report from its committee, E. B. Martin, president, on the cost of paving the street. The figures are: Granite, \$1.55; crosoteds blocks, \$3.60; granitoid concrete blocks, \$2.25. The last-named material was recommended.

**Wymore, Neb.**—At a recent meeting of the Commercial Club the paving proposition was discussed.

**Asbury Park, N. J.**—Roads leading from Trenton to the Monmouth coast are being improved under the direction of the State Road Department.

**Branchville, N. J.**—The three-mile strip of proposed macadam road which the Freeholders have authorized to be built from Culvers Gap to Branchville, will cost the county about \$17,000. State's proportion, and \$1,000 pledged by the residents of Frankford township; estimated cost to be about \$30,000; part of the road will be built on new ground.

**Jersey City, N. J.**—Chief Engineer Charles Van Keuren, of the Street and Water Board, has submitted specifications for the repaving of Communipaw avenue, from Pacific avenue to the Morris Canal bridge, on a concrete base.

Clerk George T. Bouton has been instructed to advertise for proposals for repaving Grand street, from Van Vorst to Washington streets, with wood blocks.

**Ocean Grove, N. J.**—Plans are under discussion for the construction of a new road along the ocean front, from the Highlands of Navesink to Point Pleasant. Ocean Grove Camp Meeting Association is in favor of the project.

**Plainfield, N. J.**—Council has passed over Mayor C. J. Fisk's veto the ordinance providing for an issue of \$17,000 bonds for macadamizing streets.

**Albany, N. Y.**—An ordinance has been introduced in Council providing for the widening of Orange street, between Chapel and Cross streets; it is proposed to pave the street after this work has been done.

**Buffalo, N. Y.**—Good progress is being made by the Appraisal Commission fixing properties to be taken by the city for the widening of Elmwood avenue, between Virginia and North streets.

The City Engineer will at once begin to prepare plans and specifications for paving Ludington street 26 feet wide, from Ben-zinger to Gold street; bids will be called for by the Board of Public Works.—Francis G. Ward, Commissioner.

Colonel Francis G. Ward, the Commissioner of Public Works, has been directed to have plans prepared for a \$40,000 municipal asphalt plant.

**Geneseo, N. Y.**—It has been recommended that a special election be held to vote on \$100,000 bonds for constructing new road from Avon to Mount Morris.

**Jamaica (L. I.), N. Y.**—The Board of Estimate and Apportionment, New York, has appropriated \$140,000 from its bond issues for repaving Jamaica avenue, from Van Wyck avenue to the westerly boundary of the old village of Jamaica to the Brooklyn line. The present brick pavement will be taken up and a granite block pavement relaid.

**Lyons, N. Y.**—Plans are being prepared for macadamizing Geneva street, between the Central Hudson and West Shore tracks, also 3-foot wide cement sidewalk and stone retaining wall, 100 feet on each side of West Shore tracks; work to be done jointly by the village and the railroad.

**Inwood, L. I., N. Y.**—Commission was appointed by the Supervisors of the town of Hempstead to condemn property on the east side of Lord avenue, between Bayview avenue and Long Island Railroad, in order to widen the avenue fourteen feet.

**Rochester, N. Y.**—Secretary Pifer, of the Board of Contract and Supply, has been directed to advertise for Wren street cement walks, Forster street cement walks, Durkin alley pavement, Birr street cement walks, Hawley street brick pavement, Tacoma street trap-rock pavement and superstructure for the Brighton pumping station.

During the next month contracts are to be awarded for new improvements and repairs which are to be made to the West Side boulevard, from Ridge road to Lake Ontario.

The City Council has received petitions for brick pavements on Hawley street and Plymouth avenue.

**Syracuse, N. Y.**—Council has directed the City Engineer to prepare plans and specifications for paving of Howard street, from Green to Wayne street, with first-class macadam pavement with trap-rock surface; bids will later be called for by the Board of Contract and Supply.

Hearings will be given by City Council June 22 on matter of paving South State street, East Colvin, East Brighton and Summit avenue, Bellevue to Crossett, with either sheet asphalt, vitrified brick or sandstone block, or macadam.

**North Tonawanda, N. Y.**—The Board of Supervisors has approved plans of the State Engineer for the improvement of the Lockport-Wendelville road, extending from Lockport to Wendelville, on the town line in Pendleton; the road will cost \$100,700 and is 8.17 miles in length.

**Forks, N. D.**—Plans are under way for a new road from this city to Edgerly.

**Langmore, N. D.**—At a convention June 3 plans were discussed for good roads throughout this section; George W. Cooley, State Highway Engineer can be addressed.

**Larimore, N. D.**—Good roads have been discussed for this State and arrangements will soon be made for extensive improvements.—Address A. T. Hunter, of Grand Forks.

**Ashland, O.**—Proposals will be received June 22 for \$7,800 Cottage street, \$2,000 West Eighth street, and \$1,900 Congress street improvement bonds, bearing interest at the rate of 5 per cent.—A. P. Black, Village Clerk.

**Barberton, O.**—Council will make two bond issues to cover the cost of paving Second street; the amount will be about \$30,000.

**Byesville, O.**—The bond issue for street paving carried at a recent election.

**Cambridge, O.**—The citizens on May 20 voted in favor of paving 15 streets with brick; bids will probably be asked the latter part of the month.—O. M. Hoge, City Engineer.

**Conneaut, O.**—The Commissioners of this county have decided to continue the macadamizing of the South road a distance of a little over two miles; County Surveyor Matson will prepare the plans; a rough estimate of the work means the expenditure of about \$10,000.

**Coshocton, O.**—The County Commissioners have been asked to pave the new road at the bridge in the center of Roscoe; this will involve the paving of the main street of this town.

**Elyria, O.**—Council has adopted a resolution for paving East River street, Cambridge.

**Fostoria, O.**—Council will probably macadamize Poplar street and Columbus avenue.

**Jefferson, O.**—The Trustees of Orwell township will macadamize the road west of that village the coming summer.

**Marion, O.**—Council has decided on a \$9,900 bond issue to cover the cost of paving Silver street, South High street and one or two other streets; stone walks are to be laid on a number of streets, plans for which have been prepared by George Dwyer, City Engineer.

**Salem, O.**—A new pavement is to be laid on McKinley avenue; the pavement was laid in 1898, common burnt bricks being used in place of vitrified paving brick; the bricks were cemented together instead of being sanded or tarred; the entire pavement will probably be relaid.

**Toledo, O.**—The stone pavement on Ashland avenue, from Adams street to Collingwood avenue, is to be sheeted with asphalt.

**El Reno, Okla.**—An election will shortly be held to vote on the kind of material to be used in paving streets.

**Portland, Ore.**—The petition of Julius Lampert and others for new road was granted by the County Court recently.

At a meeting which was recently held of property owners of Portland Heights, the question of new boulevard in that section was discussed; committee is to petition Council.

Vista avenue is shortly to be improved, including the construction of concrete sidewalks.

**Allentown, Pa.**—Council has passed ordinances for paving West street, from Hamilton to Walnut street, and Madison street, from Walnut to Union street, and for setting and resetting curb, etc.

**Clearfield, Pa.**—F. G. Betts, Esq., has asked Council to petition the State and County Commissioners for aid in paving South Second street, from Spruce street to connect with State road at Lawrence township line, and the Solicitor was instructed to make the necessary application.

**Connellsville, Pa.**—Jacob Kinsbursky has presented a petition to the Borough Council, signed by the majority of the residents along Cottage avenue, asking for the paving of that street; Council has passed a resolution instructing the City Engineer to make an estimate of the cost of macadamizing Francis avenue.

**Crafton, Pa.**—On motion of Messrs. Robb and Herman, an ordinance authorizing the grading, curbing and paving of Marion street, was read the first and second times in Council.

**Duquesne, Pa.**—An ordinance was read in the Borough Council calling for the paving of Library street, from South Duquesne avenue to South Second street; Council will no doubt order the work done; the street is to be paved with asphalt.

**Harrisburg, Pa.**—Coleraine township, Bedford County, has applied for permission for the construction of ten miles of road.

**Lancaster, Pa.**—The Street Commissioner has been authorized to purchase a certain kind of paving block for repair work.

Street Commissioner Cummings has been directed to do the following work: Place crossings at Frederick and Market and North Queen and Frederick streets; place an inlet at North Queen and Frederick streets; repair gutter on Marion street, between Mary and Charlotte; place an inlet at Mary and Lemon streets; place crossings at Hand avenue and Plum street and Frederick and Plum streets; place a gutter on Plum street along the new market house.

Mr. Blickenderfer suggested that some action be taken to widen Grant street, just west of Mulberry street, and the Commissioner was ordered to inquire into the matter and report.

**Mauch Chunk, Pa.**—The Borough Council has adopted ordinance for the paving of Susquehanna street, Lehigh street and Hazard street with vitrified brick.

**New Castle, Pa.**—The Street Committee of Council has been ordered to proceed with the construction of a new road to connect with the new macadamized road to Wilmington.

Councils are considering petitions for the grading of Northview avenue (formerly called Rose avenue), in Second Ward, between Highland avenue and Mercer street.

**Pittsburg, Pa.**—Council has appropriated \$50,000 for purchasing vitrified repressed paving brick and has authorized the Board of Public Works, A. B. Shepard, Acting Director, to purchase same.

**Pottsville, Pa.**—It has been announced that the two principal streets of Pottsville and Mt. Carbon will be paved at the expense

of the State as the result of the completion of the new State boulevard between Pottsville and Schuylkill Haven; a new law authorizes the State to do such work to insure the continuity of the highway.

**Scranton, Pa.**—Select Council has passed an ordinance for paving nine streets, eight with asphalt and one with Belgian blocks; they include Green Ridge street, Mifflin avenue, Quincy avenue and North Main avenue.

**Shamokin, Pa.**—At special election to be held in November, the voters will vote on proposition to borrow \$50,000 to pave the remaining unpaved streets in the town.

**Shenandoah, Pa.**—A petition has been presented asking for the paving of South Main street.

**Wilkes-Barre, Pa.**—The paving of West Main street will soon be begun, as a sufficient number of signers has been secured, and the Borough Engineer has been instructed to take measurements necessary to complete the preliminaries.

**Williamsport, Pa.**—Four sections of road are to be built by State Highway Department this summer; a total of seven miles is planned.

**Chattanooga, Tenn.**—As soon as the specifications for the permanent improvement of a number of streets under the abutting property law are passed upon by the Board of Public Works, advertisement will be made for bids for the construction of the streets. In the majority of instances chert pavement was prescribed. The following materials will be used on the various streets:

Houston street, between Battery place and East Fourth street, and between East Fourth and Vine streets, chert with combination cement curb and gutter; McCallie avenue, between the viaduct and Cemetery avenue, brick paving with limestone curbing; Pine street, between Seventh and Ninth streets, brick with limestone curb; Sixth street, between Market and Cherry, asphalt; Georgia avenue, between Ninth and Market streets, asphalt; Magnolia street, between Flynn and McCallie, chert with combined curb and gutter; Poplar, between Eighth and Ninth streets, brick with limestone curb; Eighth, between Market and Broad streets, asphalt; Hotel, between Market and Stanton, brick with granite curb; Stanton, between Main and Hotel streets, brick with limestone curb; Arcadia and Cameron, between West Sixth and Boynton Park, or Park drive, chert.

The grade of paving to be laid on Broad street, between Seventh and Ninth streets, was held up until a subsequent meeting at the request of the property owners. The paving districts of Vance avenue, between Lyerly and Highland Park avenues, and Kirby avenue, between Highland Park and Lyerly avenues, were held up pending the completion of the sewers.

**Corpus Christi, Tex.**—Movement is on foot for a new road in this section; it is proposed to issue \$100,000 bonds for the purpose.

**Culpeper, Va.**—W. E. Coons, County Clerk, can be addressed for further information regarding 30 miles of roads to be built in Culpeper County.

**Lebanon, Va.**—The Board of Supervisors for Russell County will offer for sale \$50,000 road improvement bonds.—R. G. Fletcher, Clerk.

**Norfolk, Va.**—Mayor J. G. Riddick has received from the Board of Control resolution appropriating \$3,431 for curbing and paving Tunstall and Gibbs avenue, and one appropriating \$920 for paving Redgate avenue west, from Colley to Greenway court.

**Richmond, Va.**—Work will soon be commenced on a new boulevard, to be constructed for the east end, on Thirty-fourth street; Councilman Richards, of Marshall Ward, is interested in the project.

**Seattle, Wash.**—R. H. Thomson, City Engineer, has reported the estimated cost of the following street improvements: North Forty-sixth and other streets, grading and curbing, \$21,050; East Madison and other streets, planing, \$3,200; Twenty-seventh avenue south and other streets, \$61,000; Forty-fourth avenue S. W., and other streets, grading, etc., \$41,100; Forty-fourth avenue, S. W., and other streets, concrete walks, \$28,200.

**Clarksburg, W. Va.**—Mayor has been instructed by Council to call a special election on the proposition of this city issuing bonds to the amount of \$225,000, the money to be used for street paving and extension of water works; the Board of Trade is backing the proposition.

**Beloit, Wis.**—It is very probable that brick will be used in the paving of Portland avenue.

**Manitowoc, Wis.**—Council has directed estimates to be prepared for paving certain streets with brick.—Address City Engineer.

**Milwaukee, Wis.**—The Auditorium Board has petitioned Council to take up the matter of paving Cedar and Sixth streets ad-

joining the auditorium, now building.—Address Mayor Rose.

**Sparta, Wis.**—Council has decided to pave ten blocks with brick and concrete foundation.

**Washburn, Wis.**—The Bayfield County Board has raised \$10,000 during the last year to be used for improving the roads and highways.

**Dauphin, Man., Can.**—The city is offering \$26,500 granolithic sidewalk debentures, bearing interest at the rate of 5 per cent.—J. W. Johnston, Town Clerk.

## SEWERAGE

**Prescott, Ark.**—Ordinance is before Council for organization of a sewer district practically covering entire town.

**East San Jose (P. O. Sta., San Jose), Cal.**—Trustees may call election to vote on bond issue for constructing sewers.

**Oakland, Cal.**—A resolution has been passed by Council providing for the construction of a sewer in Cameron street, from the existing manhole in Bruce street to the center line of Fourteenth street.

**Denver, Col.**—Plans are being prepared at the office of J. B. Hunter, City Engineer, for the construction of about 38 miles of brick and pipe sewers for University, Overland and Villa Parks and for Globeville.—George E. Randolph, President Board of Public Works.

**Bridgeport, Conn.**—Council has decided to construct new sewers in Martin Terrace, Brewster street, Fairfield avenue, Brothwell street and Alpine streets.

**Norwalk, Conn.**—Council will shortly take up the matter of the Brook street sewer.

**Thompsonville, Conn.**—With the pipes of the local water company extended through Fairview and the putting in of three or four hydrants, the Sewer Board is ready with plans for a new sewer through the tract on Pearl street and Fairview.

**Atlanta, Ga.**—Council has voted an issue of \$1,500,000 bonds, to be used for schools, sewerage and water works.

**Cedartown, Ga.**—The city has voted \$30,000 bonds for the construction of sewer extension and street improvements.

**Aledo, Ill.**—The city is to at once take final action for construction of \$16,500 sewer system.—W. T. Church, Mayor.

**Elgin, Ill.**—As the result of a conference between City Engineer Plum and Attorney Charles W. Lehmann, representing the Ranstead property, the city of Elgin was given permission to construct a sewer through the premises of Judge Ranstead; the place through which the sewer is to be laid is at a point between Jackson and Lynch streets, between West Chicago street and Highland avenue.

**Fulton, Ill.**—Council has been petitioned to bond for \$5,000 for constructing sewers.

**Fairbury, Ill.**—Extension of city sewer system is advocated.

**Harmon, Ill.**—Provision has been made for the construction of sewers on Main and South First streets in this town.—Address Village Clerk.

**Rock Island, Ill.**—Council has passed an ordinance providing for the construction of a 12-inch sewer in Seventeenth street, from Second to Fifth avenue; estimated cost, \$8,641.

**Sylvia, Ill.**—H. G. Paddock has completed surveys for the construction of a sewer system to empty into Rock River.—A. Walsh, President Village Board.

**Evansville, Ind.**—A resolution for the construction of a sewer along the alley between Main and Elsas from Oregon and Columbia streets, was passed by the Board of Public Works.

**Indianapolis, Ind.**—The City Engineer's estimate for constructing a sewer in Fernway street, from Bloyd to Hazell street, is \$17,700; in College avenue and other streets, from Fall creek to Forty-second street, \$160,000, and in Vigo street, from Shelby street to State avenue, \$17,000; to be advertised.

**Logansport, Ind.**—The Board of Works is considering constructing sewer in East End to cost about \$8,000.

**Marion, Ind.**—Estimates are being made by Thomas Petrie, Civil Engineer, for proposed northwestern sewer.

**Princeton, Ind.**—Assistant City Engineer Campbell has completed plans for sanitary sewer system for city.

**Rushville, Ind.**—Engineer A. L. Stewart is preparing plans for a sewer system for East Hill Cemetery.

**South Bend, Ind.**—Plans have been approved for the construction of trunk sewers in Meade street and Prairie avenue; estimated cost, \$80,000 and \$15,000, respectively.—A. J. Hammond, City Engineer.

**Cedar Rapids, Ia.**—The School Board held a meeting at which the contract for the sewerage system was let to the Marion Heating Company for the installation of the Arno system; the work will be done during the summer.



**Grundy Center, Ia.**—Chas. P. Chase Engineering Company, Clinton, Ia., is making surveys for a sewer system for this city.

**Hamburg, Ia.**—Mayor O. F. Redshaw will probably ask Council to take steps to secure estimates for constructing sewer system in city.

**Indianola, Ia.**—Council is planning the construction of a sewerage system; the cost will be about \$68,000.

**Oskaloosa, Ia.**—Council has ordered the construction of a new sewer.

**Argentine, Kan.**—The city contemplates the construction of three miles of vitrified lateral sewers.—E. McCullough, City Clerk.

**Coffeyville, Kan.**—Council has adopted specifications for a septic tank for sewer districts Nos. 1 and 3; tank will be 96x50 feet in size and will cost over \$10,000.

**Larned, Kan.**—Council has passed resolution ordering the extension of the sewer system into the Second District.

**Topeka, Kan.**—The new Martin-Dennis sewer is estimated by the City Engineer to cost between \$72,000 and \$78,000; John P. Rogers can give information.

**Topeka, Kan.**—Council has decided upon a proposed new sewer commencing on East Eighth avenue, near the Santa Fe right of way, continuing east to Division to Sixth avenue, to Sixth avenue, Market street, etc.

**Westbrook, Me.**—An order for a 250-foot sewer on new Gorham road has passed its third reading; also an order for an 8-inch sewer of 235 feet extending from the residence of Daniel Cressy on Brown street easterly to the river.

**Brockton, Mass.**—The Town Board has passed an order to take land on Fuller street for the extension of the sewer on 235 feet from Winthrop street northerly; order was also passed for the construction of a sewer on Spring street, from Belmont avenue to Moraine street.

**Chelsea, Mass.**—The Board of Control has received from the Board of Health a communication giving notice of urgent work, such as building sewers, a contagious hospital and the adoption of ordinances governing buildings on marsh land.

**Milford, Mass.**—The report of Engineer Barbour on the acceptance of private drains as a portion of the town's sewerage system has been accepted by the Board Sewer Commissioners, and by this vote private sewers on Pearl, Fayette and Main streets were accepted.

**Northampton, Mass.**—The Sewer Commission has voted to construct a sewer in Warner street and to have the City Engineer make an estimate of constructing a sewer in Norwood avenue.

**South Framingham, Mass.**—J. J. Prindiville has applied for permission to connect Company E Armory on Union avenue with the town sewer.

**Boyer City, Mich.**—Bonds for \$20,000 have been voted by the city for the construction of a sewer system.

**Flint, Mich.**—Council has voted to construct five new sewers in the First and Fifth Wards.

**Grand Rapids, Mich.**—Council has decided upon the construction of a public sewer in Valley avenue, in the alley between Lots 25 and 26 of the Grove street subdivision, and in McConnell street, commencing at Central avenue, and extending 230 feet.

**South Range, Mich.**—Village Engineer Clausen, Houghton, Mich., has completed plans and specifications for a sewerage system for South Range.

**Trenton, Mich.**—The Trustees of the town are considering the matter of bonding for the purpose of putting in a sewerage system.

**Virginia, Minn.**—Plans and specifications for a sanitary sewer on Wyoming avenue, north from Chestnut street, prepared by the City Engineer, were accepted, and the City Clerk was instructed to advertise for bids for constructing the same.

**Columbia, Miss.**—A \$50,000 bond issue has been voted for installing sewer system, water works and light plant.

**Jackson, Miss.**—Ordinance has been before Council providing for \$196,000 bond issue for extending sewers, improving water works, etc.

**Meridian, Miss.**—W. G. Wetmore, City Engineer, has completed surveys for proposed sewer to Masonic Home, north of city.

**St. Joseph, Mo.**—Ordinance is now in preparation for a \$250,000 bond issue for sewer extensions and repairs.

**Dillon, Mont.**—A 12-inch sewer is to be constructed in Sewer District No. 4 at a cost of \$4,585.—J. B. Poindexter, City Clerk.

**David City, Neb.**—A \$17,000 bond issue has been voted for constructing sewer system, which will probably be built this year.

**Nashua, N. H.**—The matter of connecting the Palm street school with a sewer main on Pine street is being considered by the Board of Health.

**Morristown, N. J.**—Bonds are to be issued to secure funds for the erection of a new sewage disposal plant.

**New Brunswick, N. J.**—Mayor Fiske, of

Plainfield, has submitted plan to Council, whereby all the municipalities, including this city, North Plainfield, Fanwood and Scotch Plains, may join in one main sewer system; the disposal works would be located near this city.

**Rutherford, N. J.**—At a public meeting held recently the erection of a new sewage disposal plant was discussed.—Thomas W. Evans, Mayor.

**Trenton, N. J.**—Council has adopted a resolution for the construction of a sewer in Pine street, from a point near Brunswick avenue, southerly to New York avenue.—Harry B. Salter, City Clerk.

**Amsterdam, N. Y.**—The City Engineer is preparing plans for a 36-inch sewer from the proposed outlet on Guy Park avenue to foot of Tryon street, and the same to be continued to foot of the hill as a 24-inch sewer; the Sewer Board has instructed the City Engineer to prepare plans and advertise for bids for a storm sewer on Rockton street, also for storm sewer on Cramers lane and along the extension of Forbes street; bids will later be called for.

**Auburn, N. Y.**—Engineer W. Thomas Wooley has charge of the construction of the ward sewers and sewage disposal plant.

**Hamburg, N. Y.**—Consulting Engineer William J. White, Mutual Life Building, Buffalo, has been retained to prepare plans for sewerage system and sewage disposal plant for the village; there will be about 10 miles of vitrified tile sewers, to cost about \$100,000.—Ferry M. Thorn, Clerk Board of Village Trustees.

**Herkimer, N. Y.**—At a meeting of the Board of Trustees, Charles Bell and Superintendent Sluyter of the Municipal Commission brought up the matter of putting in of surface sewers and were instructed to prepare plans for a system on the streets that are to be paved and also on German street.

**Jamestown, N. Y.**—The sewer and park propositions were carried by a decisive majority at the special election; \$42,000 will be expended for sewer extensions and \$20,000 for park improvements.

**Lancaster, N. Y.**—Sewer Commissioners have appointed Fairchild & Gatchell as supervising engineers for the building of the new sewer system here, which is to cost about \$150,000. A sewage disposal plant is also to be built.

**Leroy, N. Y.**—The Board of Village Trustees has decided to construct a sewer on the east side of Lathrop avenue, and tile will probably be used; Council will take up the question of paving the approaches with brick at a future meeting.

**Middletown, N. Y.**—Council has ordered the construction by day labor of a sewer in Charles street.

**Seneca Falls, N. Y.**—At a recently held meeting of the Citizens' Club the Board of Trade was reorganized and a committee was appointed to confer with the Board of Trustees regarding a sewage disposal plant for the city.

**Syracuse, N. Y.**—Chief Engineer Glen D. Holmes estimates the cost of improving 2 1/3 miles of Onondaga Creek at \$75,000.

**Troy, N. Y.**—The Board of Public Works has reported in favor of the construction of a tile sewer in Monroe court, from Pawling to Fonda avenue, and the construction of a tile sewer in Blakely court, from Pawling avenue to Fonda avenue, and both reports were adopted by Council.

**Utica, N. Y.**—The Commissioner of Public Works has authorized starting construction at once by day labor of about 300 feet of sewer on Whitesboro street, between Seneca and Washington streets.

**Athens, O.**—Council will advertise for bids for bonds for the construction of large sanitary storm sewer through the brick plant property.

**Cambridge, O.**—Councilman James Peters states that \$10,000 will be available at once for the Wall and Highland avenue sewers; a considerable amount is to be expended for paving; City Clerk Blackburn states that five resolutions for sanitary sewer construction have passed Council.

**Canton, O.**—Property owners in the Shorb addition have asked for a storm water sewer in that section of the city.

**Chardon, O.**—The city is taking steps for the purification of sewage.

**Cincinnati, O.**—Council has passed resolutions for the construction of sewers on Durr street, from Dremen avenue to Elmore street; Marquis street, from Colrain avenue to Marine street; Waverly avenue, from Pinetree street to Blaine road, and in Knox street, from Beekman street to Pinetree road.

**Columbus, O.**—Board Public Service has adopted plans and specifications for constructing sewers in Sullivan avenue, and bids will be called for at once. An appropriation of \$55,000 has been made for the work.

**Dayton, O.**—A sanitary sewer will be laid in Edgar street.

**Dayton, O.**—A \$15,000 bond issue is to be made for cleaning sewers.

**Gallon, O.**—The County Board of Deputy Supervisors of Elections have arranged for a \$58,000 bond issue for the construction of a trunk line of sewers and a sewage disposal plant.

**Greenville, O.**—A \$2,800 bond issue for a number of sewer improvements has been authorized by Council; City Engineer Jackson will prepare plans for a number of new improvements.

**Fairmount, O.**—J. B. Mitchell, Mayor of the village, states that ordinance to establish a sewer system in the village has passed Council.

**Lakewood, O.**—Proposals will be received June 29 for \$3,222 Warren road sewer bonds and \$4,074 Detroit street storm sewer bonds, interest 5 per cent.—B. M. Cook, Village Clerk.

**Marysville, O.**—The sewer extension from Cedar street to Mary place is to be constructed.—John Cameron, Chairman of the Street Improvement Committee.

**Mt. Vernon, O.**—Riggs & Sherman, Toledo, who are superintending the sewer work at Upper Sandusky, have been engaged to plan a sewer system for Mt. Vernon.

**Urbana, O.**—Plans are being made for sewer system for this city.

**Wadsworth, O.**—Wadsworth is to have a sewage disposal plant, the final transaction in securing for the village the necessary property having been concluded by the purchase of a strip of land 300 feet long to provide a roadway to the land already acquired to the site of the plant; O. D. Everhard, Village Attorney, states that Council is ready to advertise for bids for the construction of the plant.

**Stillwater, Okla.**—City Engineer Merry is preparing plans for the construction of complete system of sanitary sewers for the city; bonds were recently voted for the purpose.

**Medford, Ore.**—The Mother Provincial of the Sisters of the Holy Name is arranging with city officials for an extension of the sewer system to the new building, Catholic academy, in this city.

**Butler, Pa.**—The bid of F. G. Ross for preparing plans and superintending the construction of the sewage disposal plant has been accepted. The bid was 6 per cent. of the cost, plus \$1,000 for superintendence.

**Derry, Pa.**—A lengthy permit has been received from State Health Commissioner Samuel G. Dixon, giving the borough permission to establish a sewer system and disposal plant, per the plans which had been furnished for his examination, and an ordinance is under consideration authorizing the construction of a sewer system through the town, according to the plans prepared by the Borough Engineer, and for a disposal plant, as per plans prepared by the disposal plant expert; the sewer question is now in such shape that Council can soon advertise for bids for the construction of the system.

**Donora, Pa.**—The Highways and Sewers Committee has been authorized to advertise for bids for laying the Ninth street sewer extension on Meldow avenue, under plans to be prepared by the Engineer, President Knight, of Borough Council.

**Harrisburg, Pa.**—State Health Department has taken action on the projected sewerage improvements of following towns and boroughs in the State, local officials of which can be addressed for further information: Derry Borough, plans for sewage disposal works approved; Indiana Borough, plans for sewage disposal approved; Mercer Borough, granted permission to build small sewer, with condition that plans be prepared for disposal; Exeter Borough, permission to construct storm water sewer, must plan disposal; Grove City Borough, decree forbidding sewer extension unless plans are made for disposal; Tarentum, Brackenridge and Natrona Boroughs, Allegheny County, suggested to unite in large sewer plant; Palmerton, Carbon County, plans for sewage disposal approved; Watsonstown Borough, must submit plans for sewage disposal; Kane Borough, plans for sewage disposal approved; Wellsboro, order to prepare plans for sewage disposal.

**New Haven, Pa.**—The Council has deferred the extension of the Sixth street sewer beyond the borough limits, for, although the Council favored the extension, the members were opposed to extending the sewer and then losing control of it, which might result in many other tappings being made to it in that section. It was finally referred to a committee, composed of Messrs. Patterson, Cypher and Stoner, who were directed to take the matter up with Solicitor E. C. Higbee.—George A. Worth, Burgess.

**Mahoningtown, Pa.**—Residents of the Seventh Ward have asked Council to take up the matter of improving the sewer conditions in that section of the city.

**Newcastle, Pa.**—City Engineer Milholland states that a new site for a sewage disposal plant must be secured before sanitary sewers can be built.

**Philadelphia, Pa.**—The sewer system in West Philadelphia was condemned at the recent meeting of the West Philadelphia Business Men's Association, and Council will be asked to take up the matter of improved facilities.

**Point Pleasant, Pa.**—Borough Council has appointed committee to submit plans for a sewer system.

**Providence, R. I.**—All bids for the construction of the Tangent street sewer have been rejected and the matter will be considered at the next meeting of the East Providence Council.

**Woonsocket, R. I.**—Council has passed ordinances for the construction of a sewer in Federal street, Maple street, Bernon street and Wood street.

**Sumter, S. C.**—Council will not sell the \$50,000 sewerage bonds, which it has been found unnecessary to dispose of owing to the magnificent financial condition of the city treasury, which permitted one-half of the system, about 7 miles, to be conducted at a cost of \$37,000.

**Plankinton, S. D.**—The question of constructing a sewerage system is under consideration.

**Knoxville, Tenn.**—Bids for the extension of the first creek sewer will be opened at the next meeting of the Board of Public Works; this work is estimated to cost about \$13,000.

**Park (P. O. Station, Knoxville), Tenn.**—A \$130,000 bond issue has been voted by this city for sewer, street and fire department improvements.

**Coleman, Tex.**—Coleman Sewer Company has been incorporated; capital stock is \$2,000 and incorporators include A. L. Coulson, R. S. Bowen and J. M. Sewell.

**Salt Lake City, Utah.**—An election will be held June 30 to vote on the issue of \$106,368.96 bonds for sewer improvements.

**Bellingham, Wash.**—Council has passed resolutions for constructing a concrete outlet on C street, from Holly to Laurel, another for a sewer on Holly from Champion to C street, and the third for the section between C and E streets.

**Seattle, Wash.**—R. H. Thomson, City Engineer, has estimated the cost of the following street improvements: Beacon avenue and other streets, sewers, \$10,500; Twenty-fifth avenue, South, and other streets, sewers, \$3,700; Seventeenth avenue South and other streets, sewers, \$18,000; Fourteenth avenue South and other streets, sewers, \$4,250.

**Beloit, Wis.**—Council has passed a resolution providing for the construction of a sanitary sewer along Harrison avenue, between Clary and White avenues.

**Janesville, Wis.**—Plans, profiles and specifications for the sewer construction work have been completed in the City Engineer's office, to be in the vicinity of Pal street.

**Potosi, Wis.**—City has voted a \$3,000 loan for building concrete storm water sewers.

**London, Ont.**—The matter of construction of a sewer on Eva street will shortly be brought up by the Board of Aldermen.

## WATER SUPPLY

**Russellville, Ala.**—At an election recently held it was voted to issue bonds for the installation of a water works system.

**Alameda, Cal.**—The People's Water Company of this city is making arrangements to greatly improve the system; President Titus may be addressed.

**Chico, Cal.**—The Chico Water Company has been requested by Mayor Robbie to extend the water main from the city pumping plant down Second street to Main street; the citizens of South Chico are talking of forming a corporation and establishing a water system in that section of the city.

**Gridley, Cal.**—The Board of City Trustees have accepted the plans of Ralph Beebe, Engineer, for a water system for the city of Gridley, costing \$30,000.

**Fresno, Cal.**—At recent meeting of the Water Commission the matter of extending the water mains to Woodward's addition, Russiantown, and Grand Avenue Park was discussed.

**Sterling, Col.**—The city will shortly advertise for bids for the construction of a new reservoir, and, in addition to this, a deep well will be sunk to supply the town.

**Atlanta, Ga.**—The Georgia Savings Bank and Trust Company, George M. Brown, president, has purchased from Councilman John W. Grant, Chairman of the Council Finance Committee, \$18,000 4 per cent. water works bonds for improvements.

**Virginia, Ill.**—The Business Men's Association is interested in the establishment of a system of water works in this city.

**Council Bluffs, Ia.**—E. A. Wickman presented the only bid for the construction of the proposed municipal water works.

**Cottonwood Falls, Kan.**—The city proposes to establish \$25,000 water system; address Burns & McDowell, Engineers, Scarritt Building, Kansas City, Mo., for information.

**Emporia, Kan.**—The city is considering the matter of making a radical change in its water supply; at present the water is

pumped from the Neosho River.—Address the Mayor.

**Brunswick, Md.**—Plans have been prepared by L. S. Gardner, Chairman Street Commissioners, for a system of water works; contract will be let soon, as specifications are completed, which are now under way.—A. B. Hedges, Clerk and Treasurer.

**Manchester, Mass.**—At a special town meeting it was voted to proceed with the introduction of a high-service water system; the new system includes the building of an additional pumping station, new pumping machinery and a new standpipe of 1,000,000 gallons; the cost of new plant is estimated at \$160,000.

**Poplarville, Miss.**—A special election will be held July 8 for the purpose of voting on a proposition to issue bonds, a portion of which will be used to extend the water system.

**Springfield, Mass.**—The County Commissioners have approved of the plans for the construction of a new reservoir on Provin Mountain, to be built in connection with Springfield's Little River water supply.

**Worcester, Mass.**—The Board of Aldermen has ordered improved water service on Assonet street, Dutton, Davenport, Epworth and Whipple streets.

**Claremont, Minn.**—The village has made preliminary arrangements for the installation of a water works system in the village similar to the one at Ellendale; it is proposed to build a hollow wall cement building 20x60 feet, for the proposed system, 2,800 feet of 4-inch pipe and 250 feet of 6-inch pipe will be used; the total cost of this system is to be \$6,728.

**Cottonwood Falls, Minn.**—At the election \$25,000 was voted in bonds for a new water works system; the system will supply a city of 30,000 inhabitants.

**Newton Falls, Minn.**—The city is going to put in a \$25,000 water works system and purchase machinery which will have a capacity of 1,000,000 gallons.

**Springfield, Mo.**—The citizens have voted \$21,000 bonds for the construction of a water supply system.

**Acquackanonck, N. J.**—Residents of the Lakeview and Clifton sections have decided to create a water district and appropriate \$2,000 to install fire hydrants.

**Orange, N. J.**—A resolution providing for issuing \$180,000 of water bonds at 4½ per cent. was passed by Council; this makes a total issue of \$550,000 for the present improvement, and is supposed to cover all the work of laying new mains and building new reservoirs.

**Alden, N. Y.**—Plans are being prepared for extensions to the water system, and bids will be called for at once by John Kirk, Secretary Water Board, for a quantity of cast-iron pipe and hydrants; work will be done by day labor, in charge of the City Engineer.

**Catskill, N. Y.**—The Village Board has passed an order establishing a water district in the village of Palenville.

**Cohoes, N. Y.**—The Board of Water Commissioners has decided to install a filtration plant. The filter will be of the mechanical type with a daily capacity of 10,000,000 gallons.—A. T. Kniffin, Superintendent.

**Cortland, N. Y.**—The Water Commission has recommended that a special election be called to vote on a bond issue for \$250,000 for acquiring the municipal water works plant, either by purchase of present plant of Cortland Water Works Company or by erecting a new plant.

**Mt. Morris, N. Y.**—The town will shortly expend \$200,000 on a municipal water plant and sewerage.

**Oswego, N. Y.**—The issue of \$270,000 lake water bonds, bid upon at the City Chamberlain's office, was awarded to the N. W. Harris Company of New York, which presented the highest bid, amounting to \$278,610.30. The N. W. Halsey Company of New York followed second highest with a bid of \$276,955.90.

**Rochester, N. Y.**—Council has instructed the City Engineer to prepare plans and estimates for the following sewer work: Merle street, west end of present sewer to Hebard street; Nicholson street, from Gregory street to present sewer in Mt. Vernon avenue; Carthage alley, from Andrews street to present sewer in River street.

**Yonkers, N. Y.**—A copy of the resolution adopted by the Common Council that the Contract Board advertise for bids for the building of a suction well at the Tube Well Station; for the paving of the roof on the coal bunkers with brick at the same station and the rebuilding of the coal bunkers at the low service station was received, and City Engineer Cooper instructed to draw up plans and specifications.

**Dresden, O.**—The State Board of Health has recommended a site for wells, which will furnish the water supply; the site is about 400 feet west of the site originally proposed.

**Findlay, O.**—A dam is to be constructed across the Auglaize River near Wapakoneta; M. B. Shaw of Wapakoneta is paying special attention to this improvement.

**Hubbard, O.**—Preliminary plans for the proposed water works system for the village have been presented to the Village Council by Engineers Wheeler and Richards; plans range in cost from \$20,000 to \$30,000; Plan No. 1 contemplates the employment of open wells, with an electrically driven pump; cost, \$22,680.

**Newton Falls, O.**—Plans will be prepared at once by the Reliance Engineering Company, Cincinnati, for the proposed water works system for this town.

**Hastings, Okla.**—The Board of Trustees, headed by President J. P. Brawley, plans to call an election to vote on the question of installing water system.

**Lindsay, Okla.**—The city has engaged an engineer to prepare plans and specifications for the construction of a water works system; estimated cost, \$25,000.

**Sallisaw, Okla.**—The proposition of issuing bonds for building water works carried at a recent election.

**Stillwater, Okla.**—Engineer D. B. Mary, 418 North Broadway, Oklahoma City, is preparing plans for filter plant for the \$65,000 water works.

**Tulsa, Okla.**—The citizens have voted in favor of taking over the plant of the Tulsa Water Company and making extensions to cost \$80,000.

**Applewood, Pa.**—Water meters are about to be installed in every residence in Applewood. The Applewood Water Company has also concluded that it will be to the advantage of all to have meters put in service and accordingly arrangements to that effect are being made. The water supply for the pretty suburban town is secured from springs located on the hill above the borough.

**Franklin, Pa.**—The entire issue of bonds for the purchase of the water plant, \$260,000, has been taken by N. W. Harris & Co., a New York bond firm. The deal was negotiated by Robert C. Hall; the bid of the successful firm was at par and accrued interest, at the rate of 4½ per cent.

**Pleasantville, Pa.**—Plans are being considered for the installation of a new water system for the town.—Address Town Clerk.

**Belton, S. C.**—Proposals will be received July 1 for \$25,000 20 to 40-year optional water and school bonds.—H. G. Campbell, Town Clerk.

**Chattanooga, Tenn.**—The City Water Company is planning to make improvements to its system in this city; the company will at once lay a duplicate system of distributing mains.

**McKinney, Tex.**—The Attorney General has approved of an issue of \$8,000 bonds for water works purposes.

**Sulphur Springs, Tex.**—About \$30,000 is to be expended for new water mains and additional pumping machinery.

**Teague, Tex.**—The city has voted \$50,000 bonds for the construction of a water works system.—J. W. Maxcy of Houston, Tex., is Engineer.

**Bellingham, Wash.**—The Water Board has granted the petition of James Espy for the extension of the water main on Lake street east, a distance of 230 feet, to lot 18 in Eldridge's addition.

**Elm Grove, W. Va.**—James A. Birkett, of near this city, has a proposition under consideration for the erection of water works to supply this place and all the country as far as Fulton.

**Mellen, Wis.**—The Mellen Water and Light Company, which supplies water for this town, lost its dam during the heavy storm; has not yet decided whether to rebuild or desert the enterprise.

## LIGHTING AND ELECTRICITY

**Russellville, Ala.**—At an election recently held it was voted to bond the city for the purpose of establishing an electric light plant.

**Gridley, Cal.**—It is proposed to bond the town for \$30,000 for a water system and \$3,000 for an electric light plant.

**Tampa, Fla.**—The Tampa Electric Company proposes to issue \$200,000 bonds for improvements.—G. W. Wells, Manager.

**Shelbyville, Ind.**—The village is agitating the question of constructing a new electric lighting plant.

**Atlantic, Ia.**—J. L. Darnell, Engineer, Kansas City, Mo., is preparing plans for a one-story power-house for the city.

**Sidney, Ia.**—A stock company with about twenty business men has been organized for the purpose of establishing an electric light plant in this city; this company will be known as the Sidney Electric Light, Heat and Power Company; capital, \$15,000.—Harry Day, New Madrid, Mo., Manager.

**Solomon, Kan.**—Plans are being prepared by Burns & McDonnell, Engineers, Kansas City, Mo., for constructing an electric light plant and water works system.

**Frankfort, Ky.**—The Capitol Commission has accepted plans by Frank M. Andrews, Cincinnati, O., for completion of State Capitol, work including power house and electrical fixtures, etc.; Olmstead Bros., Brookline, Mass., will be in charge.



**Mayfield, Ky.**—The Mayfield Water and Light Company will purchase equipment for electric light and power plant.

**Alexandria, La.**—W. H. Harrison, Jr., of Biloxi, Miss., has petitioned the Board of Aldermen for a franchise for a gas plant.

**Clinton, La.**—The Town Council is considering the construction of a municipal electric light plant.

**Lansing, Mich.**—The Michigan Power Company has purchased additional piece of property on which they will erect substations.

**Philadelphia, Miss.**—The Philadelphia Electric Company has been incorporated by M. A. Cramer, H. A. Cramer and A. Cramer.

**Greenfield, Mo.**—The Greenfield Electric Company has been incorporated with a capital of \$3,000 by Leroy L. Lansing and others.

**Louisiana, Mo.**—The Louisiana Light, Power and Traction Company, F. E. Murray, Secretary, contemplates erecting repair shop and electric power house at Louisiana.

**St. Louis, Mo.**—Articles of incorporation have been filed by the West End Light and Power Company for furnishing electric light, operating under the franchise of Browning, King & Co. This company will compete with the Union Light and Power Company; Arthur K. Kloos, Manager of Browning, King & Co., is one of the incorporators; capital stock, \$50,000.

**Passaic, N. J.**—At a special election the citizens voted to build a municipal electric lighting plant.

**Albion, N. Y.**—A. L. Swett, of Medina, has petitioned for a franchise to furnish light and power.

**Munnsville, N. Y.**—An electric light plant will soon be established in this city; W. R. Paul can give information.

**Yonkers, N. Y.**—A formal notice to the Board of Contract and Supply from Commissioner Ferguson that the city's contract with the Yonkers Electric Light Company expires on the 1st of July was received, and Corporation Counsel Otis called the board's attention to the fact that it could do nothing in the way of renewing this contract until the Common Council had taken action on it.

**Salisbury, N. C.**—The Southern Power Company, Charlotte, N. C., will construct electric system in Salisbury and furnish power; it is planned to build power station in conjunction with Salisbury & Spencer Railway Company, costing about \$20,000.

**Yorkhaven, Pa.**—Plans are contemplated by the Yorktown Water and Power Company for improvements to its plant, which will increase the output of the plant at Yorkhaven from 10,000 to 20,000 h.p.; an electric crusher will be installed at the quarries; the company also proposes to extend its high-tension transmission lines to Lancaster and other cities in the lower part of Lancaster County and to Spring Grove and Hanover.—E. F. Baker, General Manager.

**Spartanburg, S. C.**—The Electric Power and Manufacturing Company will extend its line to Saxon Mills.

**Mitchell, S. D.**—The Mitchell Power and Illuminating Company has recently taken over the electric and gas plants of the Mitchell Gas Company and will immediately start to rebuild the gas plant and make other improvements that will cost \$25,000.

**McKinney, Tex.**—The Attorney General has approved for registration \$8,000 McKinney water works extension bonds and \$8,000 electric light extension bonds; interest, 5 per cent.

**Tyler, Tex.**—The Tyler Electric Company has been incorporated with a capital stock of \$30,000 for furnishing light, heat and motor power; A. E. Judge, Eugen W. Judge, and others are incorporators.

**Danville, Va.**—The city contemplates construction of new central electric plant at cost of \$150,000.—Frank Talbott, Superintendent.

**Staunton, Va.**—The Blue Ridge Light and Power Company has been granted a franchise.—J. M. Spotts, President.

**Appleton, Wis.**—The Northern Hydro-Electric Power Company, a million-dollar corporation, has been organized in this city with F. H. Josslyn, of Oshkosh, President; D. L. Parker, Green Bay, Wis., Secretary, and Frank E. Murphy, Green Bay, Treasurer; the company has acquired the possession of water power on the Peshtigo River, known as High's and Johnson's dams, and will develop that power and construct an electric power plant there, which is expected to develop 10,000 horsepower.

**Montreal, Que.**—The City Council has decided to accept the offer of the Robert Company to supply electricity in the city for lamps and motors. The company will develop power on the Beauharnois Canal. E. A. Roberts, E. B. Greenshields, G. G. Foster and others are interested in the enterprise.

**Wolsley, Sask.**—The Central Light and Power Company will increase the capacity of its plant soon. It is proposed to install a 150-h.p. gas engine and suction gas producer and a 90-kw. generator.—Lee Eoyer, Manager.

## FIRE EQUIPMENT

**Hartford, Conn.**—Site will be selected for new fire house for Company No. 15 in the southwestern part of the city.—Address Chief.

**New Haven, Conn.**—It has been recommended that the Board of Finance appropriate necessary funds for the erection of a new fireproof headquarters building for the Fire Department.—Address Chief Fancher.

**Blue Island, Ill.**—Preliminary plans for proposed Cook County Infirmary to be erected at Blue Island at a cost of \$1,000,000 will shortly be submitted to the President and members of the County Board, 218 La Salle street, Chicago, Ill., for inspection.

**Hammond, Ind.**—Architect J. T. Hutton is preparing plans for a \$15,000 fire and police station.

The Board of Public Works is taking figures for a \$8,000 fire station.

**Logansport, Ind.**—Fire Chief Livingston recommends the purchase of additional fire apparatus.

**Vincennes, Ind.**—Council has decided to build hose house No. 4.—Address City Clerk.

**Council Bluffs, Ia.**—City Engineer Etnyre has commenced work on plans for new fire station to be erected on Bryant street.—Address Alderman Jensen for further information.

**Brockton, Mass.**—The Fire Committee is considering purchase of new fire engine.—Address Chief of the Fire Department.

**Lawrence, Mass.**—An ordinance appropriating \$50,000 for a new engine house in Ward Five and a new alarm system has been passed.

**Marlboro, Mass.**—Bids are now being received for the erection of the combination fire and police building.

**Mankato, Minn.**—The Fire Chief is desirous of securing additional hose for the Fire Department.

**Minneapolis, Minn.**—Architect A. L. Dorr has completed plans for a \$20,000 two-story and basement fire station.

**St. Louis, Mo.**—A movement is being launched to have a new fire station located on the Morganford road at Garvois avenue.—Address H. F. Foretell.

**Dundee Lake, N. J.**—Arrangements are being made by the members of the local Fire Department, recently organized, to raise funds as soon as possible for purchase of new fire apparatus.

**Elizabeth, N. J.**—Plans are under way for the erection of a new fire house in the Eleventh Ward at Irvington avenue and Prince street, to be known as No. 7, and to be two stories high.

**Irvington N. J.**—Estimates will be asked for 1,000 feet of standard quality fire hose, twenty-four coats and twenty-four pairs of boots, the latter accessories being for the call men, who at present number twenty-two; the motion to purchase these was made by Councilman Boerger.

**Long Branch, N. J.**—The Oceanic Fire Engine Company has voted to ask Council to erect new fire house on Norwood avenue; Frank K. Gano is interested.

**Poughkeepsie, N. Y.**—Mayor Sague has recommended the purchase of a new engine for the Niagara company.

**Rensselaer, N. Y.**—The Clerk is to advertise for bids for new fire house, to be erected in the upper section of this place.—P. O. at Troy, N. Y.

**Rochester, N. Y.**—Mayor Edgerton is interested in the establishment of two new fire houses near the city convention hall.

**Winston-Salem, N. C.**—Council is arranging to build fire station for Company No. 2.

**Alliance, O.**—Chas. O. Silver, City Auditor, will open bids for \$7,000 4½ sub-fire station bonds to erect a sub-fire station.

**Cincinnati, O.**—Arrangements are to be made by the Board of Public Safety and the Committee on Finance of Council for the purchase of land for the erection of a combination patrol house and police station in the Second District.

The Board of Public Safety has purchased land at Maple street and Circle avenue upon which to erect a fire station for Winton place, and has ordered Architect Hake to prepare the plans.

**Findlay, O.**—Council has passed a resolution favoring the building of an engine house 36x90 feet.—Address Fire Chief.

**Philadelphia, Pa.**—A new fire station will be equipped at Sixty-third street and Lancaster avenue; a fire company will be organized.—Frank J. Hughes, Foreman.

**Pittsburg, Pa.**—Architects Thomas W. Boyd & Co. are preparing plans for a two-story \$25,000 engine house for the city.

**Westerly, R. I.**—The Pawtucket Fire District has authorized the engineers to purchase 300 feet of hose.

**Austin, Tex.**—A fire company is being organized in the Tenth Ward.—J. K. Hethcote, President.

**Dallas, Tex.**—Two new fire stations will be built and equipped with fire apparatus.—J. B. Winslett, City Secretary.

**Lockhart, Tex.**—A new fire station is soon to be erected. For further information address the Mayor.

**Texarkana, Tex.**—The Fire Department will purchase additional fire fighting apparatus.—A. B. Deloch, Mayor.

**Salt Lake City, Utah.**—Council has appropriated \$18,000 for the purchase of a combination hose cart and chemical engine.—Address Mayor Bransford.

**Roanoke, Va.**—A. L. Marsh, city was low bidder for the erection of proposed new fire station, to cost about \$10,000.

**Appleton, Wis.**—City Council is to be asked to appropriate \$5,000 for purchasing an up-to-date fire engine.

**Milwaukee, Wis.**—The Milwaukee Coke and Gas Company has decided to purchase fire apparatus for buildings.

## PUBLIC BUILDINGS

**Double Springs, Ala.**—Plans are to be secured as soon as possible for the new State High School.—Address W. R. Bond or B. J. Cowart.

**Girard, Ala.**—The School Board has decided to erect new school and a committee has been appointed to secure plans, etc.; cost, about \$10,000.

**Biggs, Cal.**—Plans are under way for a new two-story City Hall, to be 45x115 feet.

**Fresno, Cal.**—Plans have been approved by the Board of Trustees for new jail, to be brick and concrete, and cost about \$10,000.

**Los Angeles, Cal.**—A site on Seventh street is being discussed for the erection of a new jail and police headquarters building.—Address Mayor Harper, who is in favor of the new building.

Plans have been prepared by J. Lee Burton, Stowell Building, for a new school at Thirty-seventh and Durango streets, to be 74x122 feet in dimensions, fireproof, and cost about \$30,000.

**Pomona, Cal.**—A large new and modern school is being erected on San Antonio and Kingsley avenues, to be brick and stone and cost about \$25,000.—Address the School Board.

**Riverside, Cal.**—Contracts are soon to be awarded for new additions and improvements to jail.

**Santa Paula, Cal.**—A new City Hall is planned, to cost about \$4,000.

**Wilmington, Del.**—Plans are under way for securing funds as soon as possible for the Delaware Hospital.

**Danville, Ill.**—U. E. Garrett, Garrett Building, has prepared plans for new addition to each of the schools in Oaklawn, Elmwood Park, District No. 116, Danvers.

**Rochelle, Ill.**—\$25,000 has been appropriated for a new school.—Address School Board for further information.

**Indianapolis, Ind.**—A new school is to be erected at Forty-sixth and Central avenue, Broad Ripple, to be two stories high, brick and stone, and cost \$11,000.—Henry C. Brubake Company, Aetna Building, Architects.

**Muncie, Ind.**—Council has decided to secure plans as soon as possible for new City Hall, to cost not more than \$110,000.

**Muscantine, Ia.**—Architect Joseph F. Mills, 610 Washington Arcade, Detroit, Mich., is preparing plans for a new jail to cost about \$30,000.

**Pomeroy, Ia.**—The erection of a new fireproof brick and steel jail is now being discussed.—Address the Mayor.

**Salina, Kan.**—Contracts are soon to be awarded for the erection of a new City Hall.

**Aberdeen, Md.**—Otto Simonson of the American Building, prepared plans for new school, which is to be modern in every detail.

**Eastport, Md.**—J. H. Armstrong, Annapolis, has prepared plans for a large new school, to be two stories high and 70x55 feet.

**Clinton, Mass.**—Plans have been completed by Peabody & Stearns, Architects, Exchange Building, Boston, for a Town Hall, to cost about \$150,000.

**Lynn, Mass.**—Plans will soon be selected for a new Court House.

**Westfield, Mass.**—The Building Committee has voted to ask for plans for a new eight-room brick school, to cost about \$8,000.

**Detroit, Mich.**—Contracts are soon to be awarded for the erection of a new brick barn for the police station located at the corner of McClellan and Vincennes avenues.

**Greenville, Mich.**—N. O. Griswold, President of the Board of Education, can be addressed regarding two-story addition planned to Third Ward school.

**Springfield, Minn.**—Plans will soon be prepared for a new public school, to cost \$30,000.—Address the School Board.

**Hannibal, Mo.**—The question of a new City Hall at the corner of Fourth street and Broadway is being discussed; Mayor O'Brien is in favor of the new building, for which it has been proposed to issue \$75,000 bonds.

**St. Louis, Mo.**—Property bounded by Market, Thirteenth, Fourteenth streets and Clark avenue, is to be used for the erection of new municipal building; bill has been passed by Council for condemnation suits.

**Silver Bow, Mont.**—W. A. O'Brien has prepared plans for new six-room school to be erected in addition to Webster school on Aluminum street.

**Arlington, N. J.**—The local Board of Trade is in favor of the erection of a new Town Hall, to cost about \$75,000.

**Clayton, N. J.**—Plans have been prepared by S. Davis of 1600 Chestnut street, Philadelphia, Pa., for new three-story school, to be erected, to cost about \$40,000.

**Irvington, N. J.**—The Board of Education proposes to erect a new school in the southern part of the town after plans by Jos. B. Allen, to cost about \$18,000.

**Orange, N. J.**—Arrangements are under way for new City Hall.—Address Mayor Shoenthal.

**Plainfield, N. J.**—Councilman Hall, at recent meeting of Council, moved that Police Committee have charge of new police station to be erected.—Alex. Milne, Contractor.

**Buffalo, N. Y.**—The Almshouse Committee of the Board of Supervisors will recommend the erection of a new morgue building at the Almshouse.

**New York, N. Y.**—Hunt & Hunt, 28 East Twenty-first street, have prepared plans for a new station house for the police of the Old Slip squad, to take the place of the present building; new structure to cost \$225,000.

**Oswego, N. Y.**—Site will soon be purchased for a new jail.—Address Special Committee of the Board of Supervisors.

**Rochester, N. Y.**—Plans are under discussion for the enlargement of the Monroe County jail.—Board of Supervisors.

**Henderson, N. C.**—Hill C. Linthicum of Durham, N. C., has been selected to prepare plans for a new municipal building.

**Rolla, N. D.**—A new school house is to be erected by the School Board, to be brick and modern construction and cost \$25,000.

**Harrison, O.**—Bids are to be received by the Clerk of the Board of Education, Harrison township, for new school on Germantown pike, to be brick and two stories high.

**Muskogee, Okla.**—The city contemplates expending between \$125,000 and \$150,000 for school buildings.—F. E. Bennett, Mayor.

**Wewoka, Okla.**—The Board of Education can be addressed for information regarding new brick school, which it is proposed to erect, to be brick and cost \$15,000.

**Portland, Ore.**—The Board of Education is planning a new school house on Beach street, near Garfield street, to be brick and modern construction, and cost \$30,000.

**Clearfield, Pa.**—The citizens have voted to erect a new school, and \$45,000 is to be appropriated for the purpose.—Address School Board.

**Mifflin, Pa.**—The School Directors of Mifflin Township have favorably considered the proposal for the issuing of \$80,000 bonds for the erection of four new school buildings; three districts will be supplied, while a high school building will be built at Lincoln Park.

**New Brighton, Pa.**—The State Armory Board, Harrisburg, has decided to erect an armory at New Brighton; no action was taken on the erection of an armory at Reading owing to the title not being yet vested in the State.

**Palmerton, Pa.**—M. G. Prutzman, Allentown, has prepared plans for a new school, to be brick, two stories high and 66x106 feet in dimensions.

**Pittsburg, Pa.**—A modern manual training school, to cost \$50,000, will soon be erected on the grounds of the Washington sub-district school, in the Fortieth Ward by the School Board; the building will be fully equipped with machinery gymnasiums, etc., and will be free to the use of the 1,500 children of the ward. C. W. Bier, Smith Block, prepared plans.—Edward Davison, President of the School Board.

**Pittston, Pa.**—Owen McGlynn, Simon Long Building, has prepared plans for two new schools, the Roosevelt School and the Fort School, to cost about \$85,000.

**Charleston, S. C.**—The Board of Public School Commissioners, Henry A. Archer, Superintendent, will receive plans from architects for new school.

**Pinewood, S. C.**—Address the Mayor for further information concerning the issuance of \$12,000 bonds for a new school.

**Big Springs, Tex.**—A new Court House is to be erected. Cornerstone was laid recently for new building, which is to cost about \$35,000; new jail is also planned.

**Demmitt, Tex.**—Proposals will be received June 20 for \$28,000 Court House bonds, bearing interest of 5 per cent.—W. H. Barbour, County Judge.

**McCammon, Utah.**—Council has recently concluded to erect new City Hall and new jail.

**Norfolk, Va.**—The question of erecting a new Town Hall is being discussed; the present City Hall is in a very poor condition and new structure is needed immediately.

**Norfolk, Va.**—Mayor J. G. Riddick has received from the Board of Contract for his approval resolution appropriating \$2,200 for repairs and renewals of lavatories in the City Market Building.

**Spokane, Wash.**—Trustees of the Houston School, among them E. T. Camon, have purchased property for a new school, to be erected at Jefferson street and Eleventh avenue.

**Bluefield, W. Va.**—W. E. and E. L. Shuffelbarger have been asked to prepare plans for additions and improvements to be made to the McDowell County Court House, to cost in the neighborhood of \$30,000.

**Milwaukee, Wis.**—S. Brockman prepared plans for new high school, to be modern construction and cost \$15,000.—Address Architect, 746 Astor street.

## ELECTRIC RAILWAYS

**Monrovia, Cal.**—H. Kirchenschlager, Monrovia, has applied for franchises for a double track electric railway on several streets of this city.

**Oakland, Cal.**—The Board of Public Works has been authorized to construct a concrete culvert over Glen Echo Creek, at a cost of \$4,500.—F. R. Thompson, City Clerk.

**San Francisco, Cal.**—A. W. Maltby and Joseph Naphthaly have been granted franchise to construct and operate an electric railway through the tunnel which penetrates the Berkeley hills, connecting Alameda and Contra Costa Counties.

**Atlanta, Ga.**—The Georgia Railway and Electric Company will build an extension from Brookwood along Peachtree road, three miles to Buckhead.

**Atlanta, Ga.**—The Atlanta, Griffin and Macon Railway Company and the Americus and Albany Electric Railway Company have made application to the Railroad Commission for permission to issue \$5,000,000 of common stock and \$5,000,000 bonds for each company, for the purpose of constructing electric lines from Atlanta to Macon and Albany.—Address M. Felton Hatches.

**Dawson, Ga.**—The Georgia Southwestern and Gulf Railroad Company has been empowered to issue \$4,000,000 stock and \$4,000,000 bonds for its proposed line from Dawson through Terrell, Calhoun, Dougherty, Baker, Miller and Decatur Counties, Ga., to a point on the Gulf coast in Florida, 155 miles.—W. M. Legg, President; H. A. Brutton, Secretary.

**Danville, Ill.**—Danville and Southwestern Railway Company, L. E. Fisher, General Manager, has applied for franchises on a number of streets.

**Freeport, Ill.**—Residents are taking steps to secure the construction of an interurban railroad from Freeport northward through the villages of Cedarville, Red Oak, Buena Vista and Orangeville, Ill., to Monroe, Wis., a distance of about 35 miles.—C. C. Zimmerman and Henry Richart, Cedarville, Ill., are interested.

**McHenry, Ill.**—A franchise is being talked of for a new electric road which will be constructed in this town; Attorney C. P. Barnes can give information.

**Fort Wayne, Ind.**—Fort Wayne & Springfield Railway Company is considering extending its line from Decatur, Ind., to Lima, O., passing through Spencerville, Mendon and Rockford. Total length of route is 50 miles.

**Gary, Ind.**—Gary and Southern Traction Company has been incorporated with capital stock of \$10,000 to operate traction line between Gary and Crown Point. John Brown, Crown Point; Warren Bicknell, Cleveland, O.; H. W. Seaman, Clinton, Ia., and Frank M. Clark and Henry C. Wood, Chicago, are interested.

**Hobart, Ind.**—Gary-Hobart Electric Railway Company, of Gary, has been incorporated. Capital stock is \$10,000 and company proposes to operate a line in and between the cities of Gary, Liverpool, East Gary and Hobart. The directors are: L. Clark Wood, T. M. Campbell, Samuel A. Muhlhäuser, William Earle and Carroll A. Teller.

**Indianapolis, Ind.**—With principal offices in this city and capital stock of \$10,000, the Indianapolis, Cloverdale and Terre Haute Traction Company has taken out new articles of incorporation and proposes to operate a traction line in and between the cities of Indianapolis, West Newton, Mooresville, Gasburg, Monrovia, Hall, Eminence, Cloverdale, Poland, Ashville, Brazil and Terre Haute. The directors are: E. M. Bowman, H. F. Butze, Samuel P. Axtell, William L. Cooke and Harry C. Sandresky.

**Lexington, Ky.**—The Lexington Railway Company is authorized by a city ordinance to extend its lines on East Main street and on East High street.—Louis Des Cognets, Vice-President.

**Carleton, Mich.**—The Ash Township Board has granted Henry A. Everett of Toledo an electric line franchise through the township; the plan is to continue the Toledo Beach line from Monroe down the old plank road, striking Flat Rock and on into Detroit. The Township Board asked that the company build a line extending from the main line to this village, a distance of three miles, and give the citizens of this village car service, and was assured that the proposition would be given consideration.

**Kalamazoo, Mich.**—J. R. Clark, General

Manager of the Michigan, United Railways Co., states that his company is arranging to expend \$2,000,000 in laying 100 miles of new track; the company contemplates the construction of an electric road from Kalamazoo to Benton Harbor.

**Minneapolis, Minn.**—The Minnesota Construction Company has been organized with a capital of \$100,000 to build an electric railway from Minneapolis to Medicine Lake, Minn., which is to be extended later to Montevideo via, Wayzata, Long Lake, Stubbs Bay and Winsted; right-of-way has been obtained for the first section, which will be six miles long.—John Blichfeldt, President, Temple Court, Minneapolis; W. W. Bardwell, Loan and Trust Building, Minneapolis, Secretary.

**Ava, Mo.**—The electric road projected from Mansfield to Ava, which will be known as the Kansas City, Ozark and Southern, will be constructed this year; J. B. Quigley, of Sedalia, can give information.

**Columbus, Mont.**—Preliminary surveys are now under way for the interurban line which the Stillwater Power and Railway Company proposes to construct from Columbus to Cooke City, following the Stillwater River. It is stated that construction work will be started this year. Power will be developed from two falls on the Stillwater. Willard Bennett, Helena, Mont., is President of the Stillwater Power and Railway Company.

**Excelsior Springs, Mo.**—City Council has granted a franchise to Excelsior Springs and Suburban Railway Company to operate an electric line from the electric light plant to the C., M. and St. P. station, a distance of 1½ miles. Work will begin at once.

**Cleveland, O.**—The Wheeling and Western Traction Company of Cleveland has been incorporated with \$1,000 capital for the purpose of operating street railways in Uhrichsville, Dennison, Bridgeport, Cambridge, Steubenville, Zanesville and Bellaire. A. E. Townsend, T. H. Bierbach and others, Incorporators.

**Findlay, O.**—Claude Meeker and Rufus Hankey, of Columbus, announce that the Findlay and Electric line, planned two years ago, will now be built.

**New Philadelphia, O.**—The Columbus, Canton and Eastern Transit Company has been incorporated to construct an electric railway through Canal Dover, Coshocton, New Philadelphia, Newcomerstown and Newark; preliminary surveys have been made; capital stock, \$200,000.—W. J. Wise, W. W. Snyder and others, Incorporators.

**Spencerville, O.**—T. M. Berry is organizing the Fort Wayne and Springfield Traction Company to build another traction line.

**Guthrie, Okla.**—The Guthrie and Interurban Railway Company of Guthrie, with \$100,000 capital stock, has been chartered to build a line from Guthrie to a point on the Cimarron River, five miles out, at an estimated cost of \$20,000 per mile. The incorporators are: C. R. Renfro, F. E. Houghton, F. G. Grow and R. E. Overton of Guthrie, and E. C. Brown of St. Louis.

**Mutual, Okla.**—E. O. McCance of Mutual is promoting the Canadian Valley Railroad, an electric interurban enterprise, to be constructed from Mutual to Woodward and thence northward to Fort Supply, where the new Oklahoma insane asylum was recently established.

**Huron, S. D.**—The gas and electric railroad will be constructed from Huron to Aberdeen; Gross & Mack of Minneapolis can give information.

**Walla Walla, Wash.**—The Walla Walla Valley Traction Company, operating the street railway and the line to Milton, Ore., has applied to the County Commissioners for a franchise over the county roads from the south limits of the city to the north side of the Rensom Clark donation claim.

**Appleton, Wis.**—Wisconsin Traction, Light, Heat and Power Company, John S. Beggs, President, Milwaukee, is to extend its local street car line for a distance of about two miles.

**Oshkosh, Wis.**—The Oshkosh, Winneconne and Waupaca Railway Company has been incorporated and will build a road from Oshkosh to Waupaca; the capital stock of the company is \$100,000; E. H. Steiger is one of the incorporators.

**Cheyenne, Wyo.**—T. A. Cosgriff, Cheyenne, has applied for franchise for street railway in this city.

## BRIDGES

**Wilmington, Del.**—The Board of Park Commissioners have directed plans to be prepared for the construction of a bridge across Brandywine Creek.—A. Betts, Treasurer of Board.

**Chicago, Ill.**—Plans for the construction of a \$275,000 bascule bridge to replace the Erie street bridge, which collapsed a few weeks ago, have been commenced. A fund of \$100,000 was transferred from the Orleans street bridge account recently by the City Council Finance Committee, to cover the cost of work on plans and abutments. It is expected that the work of construction will take about two years.



**Streator, Ill.**—The City Bridge Engineer has been ordered by Council to obtain the help of the State Bridge Engineer in drawing plans and preparing estimates for two new bridges; Alderman Halderman can give information.

**Fort Wayne, Ind.**—President Wm. Schwier of Council is interested in the proposition to build bridges connecting Lake Side with the eastern part of the city at Harmon street.

**Sioux City, Ia.**—About \$3,000 will be expended in repairing the bridges recently damaged by floods; Alderman E. J. Hanlon can give information.

**Albion, Mich.**—A bond election to decide whether the city should be bonded for \$35,000 to build the broken down bridges carried at a recent election.

**Marshall, Mich.**—The proposition of building a bridge in South Marshall avenue to replace the one washed away by the flood in the spring is being pushed; two concerns have offered to submit plans, but as yet nothing has been done; for further information address President of the City Council.

**Meridian, Miss.**—W. G. Wetmore, City Engineer, is preparing plans for a reinforced concrete bridge on Eighth street; one span to be 25 feet long, foundation to be 10 feet deep.

**Gerald, Mo.**—The County Highway Engineer has been ordered by the court to draw plans and specifications for a bridge across Red Oak, near Walbert.

**Trenton, N. J.**—Plans prepared by the County Engineer for the construction of a combination steel and concrete bridge over a stream crossing the Scotch road near the Ewing station, have been approved.

**New York, N. Y.**—Professor William H. Burr has been engaged by the Board of Estimate and Apportionment to investigate and report upon the structural condition and strength of the Blackwell's Island bridge. He will receive \$10,000 for the job.

**Cleveland, O.**—The detailed plans prepared by A. B. Lea, County Engineer, for the construction of the Rocky River bridge on Detroit avenue, were presented to the Board of County Commissioners and signed by them and the County Auditor.

**Dayton, O.**—Bids on the construction of the new Dayton View bridge will soon be asked for; County Auditor Phillips can give information.

**Springfield, O.**—Plans for the construction of a bridge at Nelson and Sherman avenues are being prepared by the Osborne Engineering Company, Osborn Building, Cleveland; estimated cost, \$40,000.

**Youngstown, O.**—Two new foot bridges are to be built in East End park; Lionel Evans can give information.

**Atoka, Okla.**—The County Commissioners have voted to have three bridges constructed, one across Gaines Creek, to cost \$5,000; one across Bushy Creek, to cost \$4,000, and the other across Boggy Creek, four miles west of Kiowa, Okla., to cost \$4,000.—Joseph Tannehill, Chairman of County Commissioners.

**Marlin, Tex.**—John Wharton Maxey, 204 Binz Building, Houston, has been engaged by the Commissioners' Court of Falls County to design a steel highway bridge across the Brazos River, to replace the one recently washed away; estimated cost, \$55,000.

**Waco, Tex.**—The city will vote \$50,000 bonds for the construction of a permanent bridge.—Address Mayor.

### MISCELLANEOUS

**Enterprise, Ala.**—Council will offer for sale \$10,000 5 per cent., 20-year improvement bonds.

**Los Angeles, Cal.**—The Board of Water Commissioners have been petitioned to set aside tract at Compton and Slauson avenues for new public playground.

**Oakland, Cal.**—The Board of Public Works has been authorized to advertise for bids and award contracts for sweeping and cleaning certain streets by machinery for the fiscal year, 1908-1909.—Frank R. Thompson, City Clerk.

**Pasadena, Cal.**—A move for more playgrounds for the city is under way.—Address the Mayor.

**San Diego, Cal.**—The San Diego and Arizona Railway Company are going to build three piers and bulk head, which will afford 7,888 feet of dock frontage.

**Washington, D. C.**—The question of securing property at Second, T streets and Rhode Island avenue, N. W., for a new park is being discussed.

**Chicago, Ill.**—The South Park Commissioners have purchased property known as Grand Crossing site for new park in that section.

**East Peoria, Ill.**—At a recent meeting of the city officials, the question of a new garbage crematory was discussed.

**Milford, Ill.**—The citizens have voted to issue \$8,000 bonds for building public park.

**Dubuque, Ia.**—A new park for this city is being discussed.

**Chelsea, Mass.**—Board of Control desires to expend about \$35,000 for purchasing new trees and planting them within the burned

area, where practically every tree was destroyed.

**New Bedford, Mass.**—Mr. Perry, representing the American Street Car Sprinkling Co., will hold a conference with Mayor Bullock, when the contract for one car to be used in this city this season will be drawn up; the Mayor was given power in this matter by the Board of Aldermen.

**Houghton, Mich.**—The question of a new city park is being discussed; Mrs. Crane of the Women's Civic Improvement League is in favor of the scheme.

**Minneapolis, Minn.**—Bonds are to be issued for new Gateway park; Mayor J. C. Haynes is in favor of the plan.

**Jackson, Miss.**—The city will soon advertise for bids for \$196,000 improvement bonds.—A. P. Lusk, City Clerk.

**Lincoln, Neb.**—The establishment of a new garbage crematory is now being discussed.—Address Health Officer W. C. Rhode.

**Orange, N. J.**—Petitions from all three districts of the First Ward were submitted to Council by Alderman Fineran and from the Third District of the Third Ward by Alderman Coleman, calling for a special election to pass upon the voting machines; they were referred to the Elections Committee.—Mayor Shoenthal.

**Jamestown, N. Y.**—At the recent bond election an issue of \$20,000 for parks was carried by a vote of two to one. The money will be used to carry out recommendations made in a report last summer by Charles Mulford Robinson.

**Rochester, N. Y.**—A public park near Convention Hall is needed in the near future.—Mayor Edgerton can be addressed.

**Troy, N. Y.**—An ordinance has been introduced by Alderman Anderson which provides that the pumping station on Second avenue, North End, be converted into a public bath house, and that the grounds surrounding the station be used as a public park; the North End pumping station was abandoned with the advent of the new water works system.

**Canal Dover, O.**—John Crawford and R. I. Bechtel, Engineers, are working on this division and have completed some of the preliminary estimates for improving and preparing the dams on the Ohio canal.

**East Liverpool, O.**—Rinehart Bros. of East Liverpool have received a five-year contract for collecting the garbage and are going to erect a modern, up-to-date disposal plant; John W. Hohman, who is the manager, is now looking over different plants to secure ideas as to the most economical and useful plant to build.

**Newport, O.**—Council is considering the question of disposal of garbage.—Address Albert Kelly for further information.

**Portsmouth, O.**—The Orient street flood defense plans have been approved by the Board of Public Service; a wall to keep out 62 feet of water is to be built at a cost of \$50,000; this estimate includes the paving of Front street and the constructing of a new sanitary sewer.

**College Hill, Pa.**—Council has appointed a committee, consisting of Risley, Rodgers and Parkinson, to meet and confer with Beaver Falls Council concerning the erection of a garbage disposal plant in connection with Beaver Falls.

**Donora, Pa.**—The Garbage Committee of Council has been authorized to advertise for bids for handling garbage for the balance of the fiscal year, nine months, under regulations to be adopted. Council has also passed ordinance requiring each family in the borough to provide themselves with a covered garbage can, to hold not less than two bushels, under penalty of a fine.—President Knight.

**Philadelphia, Pa.**—John P. Wiggins & Co. have been granted a permit for the erection of a public bath house for the city at 211-43 North Front street; the building will cost \$14,000, will be one story high and will cover an area measuring 46x100 feet; it will contain swimming pool, toilets and Superintendent's room.

**Reading, Pa.**—Council's Committee on Garbage has recommended that the contract be awarded to the Reading Sanitary Reduction Company, which is at present doing the work, at \$2.24 per ton; it was also decided that a man to weigh the garbage be placed at the crematory.

**Dallas, Tex.**—All the wagons and tanks of the scavenger department were lost by the rise of the Trinity River.—City Director of Scavengers, Frank L. Coe.

**El Paso, Tex.**—Sealed proposals will be received for \$200,000 10-40-year optional paving bonds, \$100,000 20-40-year grading bonds, \$100,000 20-40-year school bonds, \$50,000 20-40-year sewer bonds, and \$50,000 20-40-year garbage plant bonds.—Address City Secretary.

**Lampasas, Tex.**—The citizens are interested in a new public park.

**San Antonio, Tex.**—The Committee on Parks, etc., has introduced a resolution in Council for a site for a new public park.

**Everett, Wash.**—The question of a new public park is being discussed.

**Wheeling, W. Va.**—The Board of Commissioners has been organized to look after the city bonds which will be issued in connection with the municipal improvements.—Lawrence E. Sands, Chairman.

City improvement bonds to the amount of \$750,000 have been voted for municipal improvements. These include a bridge over Wheeling Creek, street pavements, a pump at the water works, storage reservoir and new mains, a new gas plant and a garbage crematory.

The Health Committee of Council and the advisory citizens' committee have been called together by the Mayor to take up the matter of the new crematory as provided by the new bond ordinance. They include Kraft, Voellinger, Garden, Devore, Becket, and Redman, of the Health Committee; George Hook, R. H. Kincheloe and Dr. S. L. Jepson, of the advisory committee; City Engineer Cooke, Solicitor Boyce and Dr. McLain, the City Health Officer; the matter of a furnace was discussed, the crematories of several places having been inspected, and their various merits and defects were pointed out.

**Kenosha, Wis.**—Plans are under discussion for one of the finest lake shore park systems in this section.

### BIDS RECEIVED

**San Bernardino, Cal.**—The Water Commission has awarded the contract for 4,100 feet of 12-inch cast-iron pipe to the United States Pipe and Foundry Co., of San Francisco, Cal., at \$35 per ton; the George M. Cooley Co. bid \$36.35 per ton.

**Hartford, Conn.**—Contracts for road construction were awarded by the State Highway Commissioner as follows: 2,505 linear feet of macadam telford, town of Enfield, Amos Bridge's Estate, Hazardville, \$5,843.25; 5,282 linear feet of gravel road with bridge abutment, town of Litchfield, Pierson Engineering and Construction Company, Bristol, \$8,255. Other bidders were: D. B. Pierce, Jr., Company, Bridgeport, \$10,852; Joseph Mascettie, Torrington, \$9,226; 17,483 linear feet of gravel and gravel-telford road, town of Windham, A. Vito, Thompson, 89 cents for gravel and \$1.34 for gravel-telford. Other bidders were: B. D. Pierce, Jr., Co., Bridgeport, 98 cents and \$1.71; T. H. Gill Co., Boston, Mass., 99 cents and \$1.47; C. W. Tryon, Meriden, \$1.15 and \$1.65; Pierson Engineering and Construction Company, Bristol, \$1 and \$1.60; A. Brazos & Son, Middletown, \$1.19 and \$1.46.

**New Haven, Conn.**—The following contracts have been awarded by the Permanent Paving Commission: To C. W. Blakeslee Company, St. Ronan street, from Edwards to Highland street, macadam pavement and concrete gutters, \$8,851; Winthrop avenue, from George to Oak street, macadam pavement with concrete gutters, \$5,296. To Frank Brazos, Webster street, from Winchester avenue to Goffe street, macadam pavement, with Belgian block gutters, \$4,005; Newhall street, from Division to Ivy street, macadam pavement and Belgian block gutters, \$2,645; Division street, from Winchester avenue to Dixwell avenue, macadam pavement with Belgian block gutters, \$3,685; Rosette street, from Howard avenue to Morris street, macadam pavement, with Belgian block gutters, \$2,892.

**New London, Conn.**—The contract for paving Main street with brick has been awarded by the city to the Worcester Conduit and Paving Company, of Worcester, Mass., at \$2.76 per square yard.

**Washington, D. C.**—Awards have been made as follows by the Commissioners of the District for the following engineering supplies for the next fiscal year: American Sewer Pipe Company, Bessemer Building, Pittsburg, Pa., 20,000 feet of 10-inch 17.3-40 cents; 15,000 feet of 12-inch, 23.9 cents; 3,500 feet of 15-inch, 32.1-3 cents; 500 feet of 21-inch, 57½ cents; 500 feet of 24-inch, 37½ cents. National Mortar Company, Washington, \$1.52 per bbl. for cement; James M. Porter, Bessemer Building, Pittsburg, Pa., vitrified paving blocks, 1,500,000 at \$10.80 per M; Asphalt Block and Tile Company, Washington, D. C., asphalt blocks, at \$62 per M; curbing, W. P. Evans, Lithonia, Ga., 20,000 linear feet of 8x8-inch straight curbing, 80 cents; Georgia Granite Company, Atlanta, Ga., 4,000 linear feet of 8x8-inch circular curbing, \$1.02; Wise Granite Company, Wise, N. C., 6x20-inch circular, 1,000 linear feet, \$1.29; W. P. Evans, Lithonia, Ga., 15,000 linear feet of 6x20-inch straight, at 95 cents; miscellaneous castings, items 1, 3, 4, 5, 6, to New Jersey Foundry and Machine Company, 90 West street, New York; item 2, to Stuart R. Carr & Co., Boston and Montford avenues, Baltimore, Md.; Dietrich Bros., 346 North street, Baltimore, item 7; James F. Power Foundry Company, Elkton, Md., items 8 and 12; Lynchburg Foundry Company, Lynchburg, Va., item 9; John Mitchell, Jr., items 10 and 11. Bids received on 6-inch and 8-inch terra cotta and on red sewer brick were rejected. No award has been made on sand and gravel.

Bids were received as follows for furnishing cast-iron sewer pipe: (a) 5 tons of 3-inch, (b) 34 tons of 4-inch, (c) 40 tons of 6-inch, (d) 922 tons of 8-inch, (e) 438 tons of 12-inch: Lynchburg Foundry Company, Lynchburg, Va., (a) \$29.44, (b) \$26.44, (c) \$25.44, (d) \$24.94, (e) \$24.94; John Fox & Co., 253 Broadway, New York, (a) \$30.40, (b) \$29, (c) \$27.50, (d) \$27.25, (e) \$27.25; Camden Iron Works, Camden, N. J., (b) \$28.44, (c), (d), (e), \$27.33; Dimmick Pipe Company, Birmingham, Ala., all sizes, \$25.48; United States Cast-Iron Pipe and Foundry Company, 80 Broadway, New York (a), (b) \$27, (c), (d), (e) \$25.85; Central Metal and Supply Company, 611 East Lombard street, Baltimore, Md., all sizes, \$29.60.

Bids were received as follows for paving roadway at the pumping station: Cranford Paving Company, Washington, laying trap pavement, 69 cents per square yard; relaying granite paving, 65 cents. R. E. Boisseau, Washington, trap pavement, 83 cents; granite pavement, 53 cents.

**Idaho City, Ida.**—The Minneapolis Steel and Machine Company, Minneapolis, Minn., has been awarded the contract by the County Commissioners for the construction of a 250-foot steel bridge across the Payette River at Smith Ferry, at \$6,450. Other bidders were: Inter-Mountain Bridge and Construction Company, three 80-foot spans, steel tubes, \$5,997; two 120-foot spans, steel tubes, \$6,973; two 125-foot spans, steel tubes, \$8,498; piling approaches \$4.74 per linear foot; Denver Bridge Company, Plan A, one 250-foot span, \$10,900; Plan B, two 125-foot spans, \$7,987; J. H. Forbes, Ltd., Plan A, three 85-foot spans, \$5,486; Plan B, three 85-foot spans, \$5,786; Plan C, three 85-foot spans, \$6,238; Plan D, two 126-foot spans, \$6,261; Plan E, two 126-foot spans, \$6,799; spiling in tubes, 40 cents per linear foot each spile; Charles F. Sheely, two 125-foot spans, \$7,789; spiling approaches, \$4.45 per linear foot; spiling in tubes, 75 cents per linear foot.

**Chicago, Ill.**—Thomas L. Dooley submitted low bid for asphalt paving repair work throughout the city for the year at \$45,000. —John J. Hanberg, Commissioner of Public Works.

**Freeport, Ill.**—H. Ford, a Cedar Rapids, Ia., contractor, was the low bidder for the work on Freeport's big sewer, his offer being \$42,362.50.

**Joliet, Ill.**—William Moran was awarded the contract by the Board of Local Improvements for the construction of the Franklin and Ohio street water main at \$3,378; Ross & Curtis bid \$3,441 for this work. —Hubert A. Stevens, City Engineer.

**Bloomington, Ind.**—W. H. Harris, of Terre Haute has been awarded the contract to build an eleven-mile sewer system; the \$29,000 purifying plant is to be located two miles south of the city.

**Brown Township, Ind.**—Contract has been awarded to Scribner & Gardner, of Russellville, Ind., for building a stone road for \$6,300. —Bennett B. Engel, Engineer.

**Brazil, Ind.**—Michaels & Minnik, sewer contractors of Marion, were awarded the contract for building the two-mile sanitary sewer through Pogue's Run at a cost of \$34,269.

**Frankfort, Ind.**—At the office of Charles F. Cromwell, the County Auditor, the Commissioners opened the bids for the construction of several new gravel roads in the county. The lowest bidder in each case was given the contract, except on the Rice and Strain roads, where Mr. Nees was low, but the bond was defective, and the contract for the Rice road went to R. C. Clark, and the Frankfort Construction Company was given the contract for the Strain road. The bidders and their bids were as follows:

Rice road: David Nees, \$1,889; R. C. Clark, \$2,167; Kelley Bros., \$2,347; Frankfort Construction Company, \$2,296; Kelleher & Slipher, \$2,490.

Strain road: D. Nees, \$3,939; R. C. Clark, \$4,413; Kelley Bros., \$4,435; Frankfort Construction Company, \$4,135; Kelleher & Slipher, \$4,700; A. E. Betts, \$4,440.

Derrick road: D. Nees, \$3,719; Kelley Bros., \$3,157; Charles Huffine, \$3,299.

Jenkins road: R. C. Clark, \$9,487; Kelley Bros., \$6,978; Jos. Nagle, \$7,395; Frankfort Construction Company, \$7,965; Jenkins & McKinzie, \$7,690; A. E. Betts, \$8,645.

Boulder road: R. C. Clark, \$7,361; Kelley Bros., \$6,380; Frankfort Construction Company, \$5,925; Kelleher & Slipher, \$7,440; A. E. Betts, \$7,770.

Jenkins road: Kelley Bros., \$2,640; Joseph Nagle, \$2,318; Frankfort Construction Company, \$2,635; Jenkins & McKinzie, \$2,450.

Allen road: Kelley Bros., \$4,847; Jos. Nagle, \$4,830; Kelleher & Coon, \$6,199; Frankfort Construction Company, \$4,865; Jenkins & McKinzie, \$4,760.

Irwin road: Kelley & Co., \$5,670; Kelleher & Coon, \$7,357; Frankfort Construction Company, \$5,255; Jenkins & McKinzie, \$7,300; Kelleher & Slipher, \$6,270.

**New Albany, Ind.**—The bond of William O. Sweeney, of Jeffersonville, for \$16,500 for the completion of the West Main street vitrified

brick pavement within 150 days was accepted by the Board of Public Works, and the contract was signed by Mayor Jacob Best and the members of the Board; the vitrified block will come from Portsmouth, O.

**Cincinnati, Ia.**—Following is a list of bidders on Town Hall and Pythian Temple; building, 30x80 feet, two stories, brick: J. W. Enyart, Agency, Ia., \$7,473; W. B. Cambron & Clark, Moulton, Ia., \$6,232; J. A. Corder, Cincinnati, Ia., \$6,240; J. C. McDonald & Bro., Cincinnati, Ia., \$6,198; A. Mardis, Corydon, Ia., \$7,036; J. F. Patterson, Council Bluffs, Ia., \$6,398; Whitney & Bergdahl, Mt. Pleasant, Ia., \$5,850. Whitney & Bergdahl were awarded the contract. —H. S. Jaquins, Town Clerk.

**Cherokee, Ia.**—T. D. Campbell has been awarded contract for constructing 2,000 linear feet street crossings, five parts sand, one cement, at \$1.31½, foundation put in by the city. —Wm. Shordlun, Jr., City Clerk.

**Carrollton, Ky.**—Council has let the contract for the proposed electric light plant to Samuel Hill, Jr., of Cincinnati, for \$19,200.

**Louisville, Ky.**—The Board of Public Works opened proposals for sixteen squares of asphalt reconstruction at an estimated cost of about \$70,000; there were four bidders, the American Standard Asphalt Company, the Barber Asphalt Company, the Fitch-Troxel Company and J. F. Hill, of Chicago.

**Baltimore, Md.**—Berghaus & Moffitt, Harrisburg, Pa., have submitted the lowest bid for the construction of 22,686 square yards of from 6 to 8-inch macadam pavement on natural soil at \$39,087; other bidders were: McDowell & Brown, \$41,989; George Killeen & Co., \$45,762; Roland Park Company, \$41,218; Klipp & Bofst, \$41,357; C. C. Magruder, \$41,153. —W. W. Crosby, Chief Engineer.

**Boston, Mass.**—Several city departments opened bids for various municipal purposes, the most important being those opened by the Schoolhouse Commissioners for the erection and completion, including heating, ventilating, electrical and plumbing work of a new grammar school in the Edward Everett district, Dorchester. There were eleven bidders, all of whom submitted bids on three items. The first item was on the original specifications and the other two items were in case stone or cinder concrete are used.

The lowest bid, according to the original specifications, was that of J. F. Griffin & Co., whose proposal was \$123,400. The other bids were: C. H. Belledue, \$124,900; John B. Byrne, \$136,477; William Crane, \$128,667; George A. Fuller Company, \$127,990; P. H. Jackson & Son, \$134,150; J. E. Locatelli, \$129,622; Mack & Moore, \$134,400; O. Piotti, \$151,600; Whiton & Haynes, \$128,200; McGahey & O'Connor, \$128,109. The proposals were taken under advisement.

Water Commissioner Hannan opened bids for furnishing ice for the ice fountains throughout the city. There were three bidders, all of whom offered to furnish the ice for \$3 per ton. However, the Independent and Boston Ice Companies offered to deliver the ice for that price in all parts of the city, whereas the Hygeia Ice Company confined its delivery for that price to four sections. These bids were also taken under consideration.

Superintendent of Streets Emerson opened bids for the collection and removal of house offal in the Brighton and West Roxbury districts. In Brighton Peter Pilkington offered to do the work for \$3,500 per year, while John Newbury's price was only \$2,600. For the West Roxbury work there were three bidders: John Krug, \$2,700; Frank M. Doyle, \$3,110, and William H. Kennelly, \$2,490. No award was made in either case.

The lowest bidder for a two-year contract for collecting and removing house garbage in East Boston, bids for which were opened June 5, is John T. Lane of East Boston, whose bid is \$5,000 for each of the two years. Thomas Mulligan bid at \$5,500 and Frank Neilon bid at \$7,750.

Proposals for heating and ventilating the North End bathhouse in North Bennet street were received as follows: C. H. Sanborn, \$7,631; Alexander Duncan Company, \$7,595; Hughey Brothers Company, \$7,247; Cleghorn Company, \$7,135; J. J. Hurley & Co., \$6,995; Lynch & Woodward, \$6,943; James P. Dwyer, \$6,769; Larkey & McMurrer, \$6,624; Isaac Coffin & Co., \$6,312.

**Shrewsbury, Mass.**—The contract for installing the municipal electric light system has been awarded to the Delta Electric Company, Worcester, for \$11,159. The contract for electrical energy for operating the system has been awarded to the Marlboro Electric Company for a term of five years. Under the terms of the contract the Marlboro Company is to deliver electricity at 6,600 volts, 3-phase, near the Town Hall, and is to maintain and erect the transmission line from its plant to the sub-station. A 24-hour service will be furnished. —Eugene W. Godfrey, Superintendent Marlboro Electric Company.

**Wellfleet, Mass.**—Thomas & Connor, of Middleboro, have secured contract at \$16,240,

to construct a dike on the Herring River at Wellfleet; the dike will be used for power purposes.

**Benton Harbor, Mich.**—W. H. Roney, Chicago, Ill., has been awarded the contract for constructing a bridge over the St. Joseph River at Benton Harbor and St. Joseph, consisting of one swing-span, 200 feet long, two approach spans, 56 feet long; roadway 32 feet, walks 7 feet, at \$57,000, exclusive of electric equipment and paving of creosoted timber, etc., for which \$4,000 is allowed. Bids were opened on May 21. —J. W. Pearl, Benton Harbor, Engineer.

**Corunna, Mich.**—Bid accepted for erection of new public school building of George Richman Sons Co., Kalamazoo, Mich., at \$26,000, exclusive of heating and plumbing. —W. A. Rosekrans, Secretary Board of Education.

**Detroit, Mich.**—Brick paving and repaving bids opened at the Public Works Department are declared by Secretary W. W. Magee, in the absence of Commissioner Haarer, to be lower than any in the last five years on the average. The average for five streets and one alley sent in was \$2.30 per square yard, as against \$2.49, the average for twenty streets and alleys last year. Following are the lowest bidders: Sylvester street, new paving, cedar, Thomas E. Currie, \$8,488.36; Twenty-third street, brick, Ferd Porath & Son, \$1,845.14; Jay street, city furnish brick, F. Porath & Son, \$4,048.13; Larned street, city furnish brick, Thomas E. Currie, \$7,616.17; Woodbridge street, city brick, Ferd Porath & Son, \$1,010.82; Elmwood avenue, city brick, T. E. Currie, \$8,709.09; Twenty-third street, new paving, Ferd Porath & Son, city brick, \$1,845.14; Minnie avenue, new paving, cedar, F. Porath & Son, \$5,710.44.

**Grand Rapids, Mich.**—The following contracts have been awarded for grading and graveling Eleventh street to Hilding & Johnson for \$12,200; improving Buchanan street, to William T. Johnson, for \$4,576.

**River Rouge, Mich.**—Julius Porath, of Detroit, has been awarded contract for the construction of the village sewers; if brick and crock are used in the 16 miles of sewerage he will receive \$122,000, and if brick and cement are used \$126,000; Council will insist that the work be started at once and that it be completed within a year. A property holder threatens to tie the matter up again by injunction on the ground that the sewerage will pollute the waters of River Rouge.

**Gulfport, Miss.**—Graves, Mathews Shale Brick Company, Birmingham, Ala. (a), has been awarded contract for street paving with brick, grout filler, at \$122,536.45, other bids being as follows: Copeland Inglis Shale Brick Company, Birmingham, Ala. (b), \$129,863; Southern Paving and Construction Company, Chattanooga, Tenn. (c), \$128,533.60; West Construction Company, Chattanooga, Tenn. (d), \$130,526.75; Crockett Paving Company, Birmingham, Ala. (e), \$137,424.90; with brick and sand filler, (c) \$125,333.60, (a) \$119,336.45, (b) \$125,863, (e) \$133,424.90, (d) \$128,026.75; creosoted blocks, (d) \$138,526.75, (e) \$143,824.90 and \$140,224.90; Southern Bitulithic Company, Nashville, Tenn., \$154,117.50, and with bitulithic, \$132,917.50; asphalt, Barber Asphalt Company, Philadelphia, Pa., \$124,729, and with bituminous macadam, \$127,539; with granitoid, Rudolph S. Blume Co., Chicago, Ill., \$123,101.75.

The details of the successful bid follow: 40,000 square yards paving, \$2.15; 5,000 square yards, alley, \$1.57; 14,000 linear feet concrete curb and gutter, 58 cents; 1,400 linear feet curved concrete curb and gutter, 20 foot rad., 94 cents; 14,000 linear feet straight concrete curb, 37 cents; 1,400 linear feet curved concrete curb, 20 foot rad., 73 cents; 14,000 linear feet straight granite curb, 18 inches depth, 44 cents; 1,400 linear feet curved granite, 18 inches, 20 foot rad., 45 cents; 8,500 linear feet straight 16-inch granite, 42 cents; 125 linear feet curved 16-inch granite, 4 foot rad., 43 cents; 6,800 linear feet straight 14-inch granite, 38 cents; 90 linear feet curved 14-inch granite, 3 foot rad., 39 cents; 40 linear feet curved 14-inch granite, 2 foot rad., 39 cents.

The following bids were received for storm water sewers: J. W. Gurley & Co., Mobile, Ala., \$15,836.90; Irwin Bros., New Orleans, La., \$17,756; C. M. Burkhalter, Birmingham, Ala., \$19,257.50; Pouncy Paving and Construction Company, Helena, Ark., \$26,215. The items of the successful bidder, J. W. Gurley, were as follows: 17 manholes, 6 feet deep or less, \$35; 4 manholes, 6 feet to 8 feet deep, \$37; 2 manholes, 8 feet to 10 feet deep, \$43; 36 catchbasins, \$29; 10 gutter basins, \$23; 2,800 linear feet of 24-inch pipe, 6 feet to 8 feet, \$1.97; 100 linear feet 24-inch pipe 6 feet deep or less, \$2.07; 340 linear feet 20-inch pipe 6 feet deep or less, \$1.161; 950 linear feet 18-inch pipe 6 feet deep or less, \$1.26; 1,200 linear feet 15-inch pipe 6 feet deep or less, 97 cents; 2,500 linear feet 12-inch pipe 6 feet deep or less, 69 cents; 3,700 linear feet of 10-inch pipe, 6 feet deep or less, 47 cents; 2,100 linear feet of 8-inch pipe 6 feet deep or less, 43 cents; 1,500 linear feet of 6-inch pipe 6 feet deep or less, 90½ cents; 50 cubic yards



extra excavation, 25 cents; 50 cubic yards extra excavation, 35 cents; 10 M. B. M., \$15; 10 M. B. M., \$12; 2 concrete bulkheads, \$30; 5 cubic yards of extra concrete masonry, \$6; 5 cubic yards of extra brick masonry, \$7; 20 square yards of cement sidewalks, 90 cents.—M. F. Sullivan, City Engineer.

**Butte, Mont.**—S. P. Guilmont was awarded the contract for the construction of permanent and wooden sidewalks at the following prices: Permanent sidewalks: Reinforced walk, \$2.25 per square yard; cement walk, \$1.65 per square yard; curb, concrete, 55 cents per linear foot; crosswalks, \$2.25 per square yard; lumber, in place, per 1,000 feet, \$30. Wooden sidewalks: For walks 12 feet wide, 85 cents per linear foot; walks 10 feet wide, 70 cents per linear foot; walks 9 feet wide, 65 cents per linear foot; walks 8 feet wide, 60 cents per linear foot; walks 7 feet wide, 50 cents per linear foot; walks 6 feet wide, 49 cents per linear foot; walks 5 feet wide, 45 cents per linear foot; walks 4 feet wide, 30 cents per linear foot; walks 3 feet wide, 20 cents per linear foot; walks 2 feet wide, 15 cents per linear foot; lumber in cross stringers, braces, posts, railings, etc., \$3 per 1,000 feet.

**Merchantville, N. J.**—Bids of four contractors for the completion of the Merchantville sewerage system were opened at an adjourned meeting of Borough Council and were as follows: Bunting & Co., \$69,625.35; Eudiosi & Son, \$70,338.39; Sweeten & Son, \$57,300; Aaron Ward, \$57,467.80.

To conform with all legal demands in connection with the suit against the New York contractors who defaulted on the job last summer, no contract was issued, but a resolution was adopted to serve notice upon the contractors that a contract would be made at the next meeting; it is supposed from the figures that Sweeten & Son will secure the job.

**Orange, N. J.**—Brennan & Finnegan were awarded the contract for mason and iron work on the Valley fire house, and J. A. Hoffman the contract for the rest of the work.

**Paterson, N. J.**—The Board of Public Works awarded the contract for permanent street improvements to the MacDonald Construction Company, at \$1.97 and \$3.27. The following bids were received:

Fair street, from Washington to Paterson streets, to be paved with asphalt: MacDonald Construction Company, \$1.97 per square yard; John R. Lee, \$2.15; Barber Asphalt Company, \$2.18.

Prince street, from Market to Grand streets, to be paved with asphalt: MacDonald, \$1.97; John R. Lee, \$2.15; Barber Company, \$2.18.

Clark street, from Market to Ward streets, to be paved with asphalt: MacDonald, \$1.97; John R. Lee, \$2.15; Barber Company, \$2.18.

Smith street, from Union to Clark street, to be paved with asphalt: MacDonald, \$1.97; John R. Lee, \$2.15; Barber Company, \$2.18.

Fair street, from Main to Washington streets, to be paved with asphalt macadam: Barber Company, \$1.93; MacDonald, \$1.97; John R. Lee, \$2.

Godwin street, from Main to Washington streets, to be paved with asphalt macadam: Barber Company, \$1.93; MacDonald, \$1.97; John R. Lee, \$2.

Hamilton avenue, from Main to Washington streets, to be paved with asphalt macadam: Barber Company, \$1.93; MacDonald, \$1.97; John R. Lee, \$2.

Essex street, to be paved with asphalt macadam: Barber Company, \$1.97; MacDonald, \$1.97; John R. Lee, \$2.15.

Governor street, from Straight street to Graham avenue, to be paved with asphalt macadam and palisade block: Barber Company, asphalt macadam \$1.97, block \$2.68; MacDonald, asphalt macadam \$1.97, block \$2.70; John R. Lee, asphalt macadam \$2, block \$2.75.

Carroll street, from Broadway to Park avenue, to be paved with wooden blocks: Union Building and Construction Company, \$3.14; MacDonald, \$3.27; John R. Lee, \$3.20; McKiernan & Bergin, \$3.45; American Creosoting Company, \$2.90; William A. Ring, \$3.19.

The MacDonald Construction Company did not put in a bid for the paving of Hamilton avenue, from Washington to Paterson streets, with asphalt. The specifications required that the bidders should also submit figures for sewer work. For the paving portion of the bid John R. Lee's figure was \$2.15, and the Barber Asphalt Company's \$2.18.

**Woodbridge, N. J.**—Bids were opened for the macadamizing of Woodbridge avenue for a distance of 1,360 feet northerly from Avenel street, and laid over for consideration: Raymond Thompson, \$1.18 per square yard; Lidle & Pfeiffer, 98 cents per square yard; Thomas Dunigan, 93 cents per square yard.

**Roswell, N. M.**—The Fred M. Prescott Steam Pump Company, Milwaukee, Wis., were awarded the contract by the Water and Sewer Commission for a 2,000,000-gallon Cor-

liss cross-compound condensing high-duty pumping engine, and for a 2,000,000-gallon compound-condensing direct-acting pumping engine.—Burns & McDonnell, Scarritt Building, Kansas City, Mo., Engineers-in-Charge.

**Brooklyn, N. Y.**—The following bids were opened by the Park Board for furnishing the material and repairing the asphalt roadways of Glenmore avenue, the Eastern Parkway extension and walk in Prospect Park, Borough of Brooklyn: (a) 3,100 square yards asphalt roadway repairs, (b) 800 square yards asphalt walks resurfacing, (c) totals: The Barber Asphalt Paving Company, 114 Liberty street, New York, (a) \$3.19, (b) \$2.74, (c) \$12,081; Cranford Company, 190 Montague street, Brooklyn, (a) \$3.73, (b) \$2.78, (c) \$12,237.

**Buffalo, N. Y.**—Bids have been opened by the Department of Public Works for the construction of a steel water tank to be erected at Kensington avenue and Grider street, and for a tower to surround it, as follows: Tank: Reebes Bros. Company, \$12,150; the American Bridge Company, 42 Broadway, New York, \$13,794; Farrar & Trefts, \$13,830; Lake Erie Boiler Works, \$14,000; Chicago Bridge and Iron Works, \$15,760; Walsh's Holyoke Steam Boiler Works, \$16,500; Riter, Conley Manufacturing Company (two bids), \$16,970 and \$13,256; Tippet & Wood, \$16,990. Tower: (a) Terra cotta trimming, (b) litholite trimming, B. I. Crocker Company, (a) \$38,300, (b) \$39,173; Buffalo General Building Company, (a) \$38,400, (b) (2 bids), \$41,105 and \$40,615; Metz Bros., (a) \$39,264, (b) \$41,335; George Schaff, (a) \$40,370, (b) \$41,770; Peter H. Frank, (a) \$42,424; John Lannen, (a) \$45,363, (b) \$47,326.—Francis G. Ward, Commissioner.

**Croton Falls, N. Y.**—The contract for the construction of two highway bridges here and for repairs to the bridge near Ossining has been awarded by the Commission on Roads and Bridges to M. Fitzgerald, of Hoo-sick Falls, N. Y., at \$11,489.—George I. Ruscoe, White Plains, Chairman Commission.

**Lockport, N. Y.**—The C. B. Whitmore Company will pave Chestnut street with vitrified brick, from Market to Elm street, and from Elm street to Vine street with macadam; the bids received were as follows: C. B. Whitmore Company, city, \$20,400; C. N. Stainthorpe Company, city, \$21,897; J. Bonnell Barley, Buffalo, \$26,280.

The bids for preparing the plans for the new Morrison W. Evans annex to the city hospital were opened; there were but two bids, as follows: L. C. Wille, 5 per cent. of the contract price; Green & Wicks, 10 per cent. of the cost of the building. This means that Mr. Wille will prepare the plans and superintend the construction of the building for five per cent. of the contract price, while the other firm, which is a Buffalo company, wants 10 per cent. of the entire cost of the building, which included any extras that might be ordered. The contract was awarded to Wille, who is a local contractor.

**New York, N. Y.**—Award of the contract to build the Rondout siphon, a part of the \$161,000,000 undertaking for the city's new water supply, was made by the Board of Water Supply to the T. A. Gillespie Company. Its bid was \$6,290,803.50. There were five other bidders. The tunnel is to be four and one-half miles in length and in several places 700 feet in depth. Four and one-half years are given to complete the work.

Charles Cochar was low bidder, at \$4,470, for the erection of a milk booth for the Department of Parks.

The lowest bid opened by Louis F. Haffen, President of the Borough of the Bronx, for wood block pavement on Charlotte street, Rogers place and Minford place, was submitted by the Barber Asphalt Paving Company, 114 Liberty street, at \$14,695, \$10,824 and \$16,285, respectively.

Bids were opened by the Park Board as follows: For raising grade of loop in Riverside drive at One Hundred and Twenty-seventh street and other work incidental thereto: Alamo Construction Company, \$14,702; Atlantic Construction Company, \$13,021; Thomas Crimmins Contracting Company, \$14,891; Bart Dunn, \$9,275; P. T. Kane, \$18,414; William H. Masterson, \$11,212; for furnishing and delivering to the Park Board (a) 3,000 cubic yards stone or trap rock; (b) 3,000 cubic yards screening of trap rock; (c) total: Clinton Point Stone Company, (a) and (b) \$2.30, (c) \$14,280; Jacob E. Conklin, (a) and (b) \$2.26, (c) \$13,560; Manhattan Trap Rock Company, (a) and (b) \$2.23, (c) \$13,380.

**Niagara Falls, N. Y.**—Bids were received by the Board of Public Works from four contractors for paving Cleveland avenue, from Main street to Twenty-second, and on Twenty-second street to Niagara avenue, also for the paving of Pine avenue, from Twenty-second to Sugar streets.

Following are the figures presented on the Cleveland avenue contract: H. P. Burgard, \$48,121; Barber Asphalt Company, \$49,702.95; Read-Coddington Company, \$41,646.55; F. V. Bardol, \$48,021.

For brick gutter Burgard's bid was \$55,271, and Barber Company, \$49,702.95. The City Engineer's estimate was \$49,459.

The bidding on the Pine avenue contract was: Burgard, \$39,953, with brick gutter, \$43,814.60; Barber Company, \$41,155, with brick gutter, \$44,973.88; Read-Coddington Company, \$35,795.76; F. V. Bardol, \$40,312.20. The City Engineer's estimate was \$39,281.

In addition to these the following bids were submitted for the paving of the alley between Main and Tenth streets, from north line of Cleveland avenue to the south line of Niagara avenue: Barber Company, \$1,525.50; Burgard Company, \$1,455.75; Read-Coddington Company, \$1,287; F. V. Bardol, \$1,434.50.

**Port Washington, N. Y.**—Small & Walsh have contract for new high school to be erected on Flower Hill avenue; cost, about \$72,500.

**Rochester, N. Y.**—The Board of Contract and Supply has received bid for cleaning out the Holly water mains, so as to give better water pressure for fire service, from the National Water Main Cleaning Company of New York, the total being \$31,140.

There were bids on several pavements. All were referred to City Engineer Fisher for tabulation. The apparent low bidders follow: Evergreen street, brick pavement, Julius Friederick & Company; Earl street, brick pavement, Whitmore, Rauber & Vicinus; Winter street asphalt pavement, Rochester Vulcanite Pavement Company; Wait street, brick pavement, F. C. Lauer & Sons Company; Locust street, brick pavement, F. V. Brotsch, Jr.; Stewart street, block pavement, Whitmore, Rauber & Vicinus.

**Syracuse, N. Y.**—Upon bids aggregating nearly half a million dollars, the United States Cast Iron Pipe and Foundry Company was awarded all contracts for the furnishing of pipe for the new conduit line to Skaneateles Lake by the Board of Contract and Supply. The company was the only bidder to submit proposals upon each of the four sections of the contract and was low upon all sections except No. 1. Upon this the Warren Foundry and Machine Company of New York offered a bid about \$300 lower, but owing to a nonconformity with the specifications the bid was declared informal.

Upon Section 1, covering 1,760 tons of 42-inch, 2,660 tons of 30-inch, two tons of 10-inch pipe and 36,000 pounds of special castings, the Cast Iron Pipe Company bid \$24.40 a ton for the pipe and 2½ cents a pound for the castings; this made a total of \$108,796.80; the informal bid of the Warren Foundry and Machine Company called for \$108,459.40.

Upon Section 2, covering 4,765 tons of 30-inch and one ton of 8-inch pipe and 18,000 pounds of special castings, the successful bidders asked \$23.40 a ton for the pipe and 2½ cents a pound for the castings; the total bid for this section was \$111,974.40. The Camden Iron Works of Camden, N. J., submitted a bid of \$23.70 for the pipe and 2½ cents for the castings on Section No. 2, making a total bid of \$113,404.20.

For Section No. 3, composed of 4,100 tons of 30-inch, two tons of 10-inch, one ton of 6-inch straight pipe, fifty-seven tons of 30-inch curved pipe and 26,000 pounds of special castings, the United States Company bid \$23.80 a ton for the straight pipe, \$60 for the curved pipe and 2½ cents a pound for the castings; the total of the bid was \$101,721. The Dimmick Pipe Company of Birmingham Ala., competed on this section, submitting a bid of \$105,684.25, its average for the straight pipe being \$24.25 a ton, the prices on curved pipe and castings being practically the same as that of the successful bidder.

On Section No. 4, covering 6,040 tons of 30-inch and one ton of 6-inch pipe and 60,000 pounds of special castings, the Cast Iron Pipe Company bid \$23 a ton for the pipe and 2½ cents a pound for the castings; the amount of the bid was \$140,443. The Warren Foundry and Machine Company bid \$23.50 for the pipe and 2-10 cents a pound for the castings, making a total bid of \$143,403.50.

The total sum of the four contracts awarded by the Board of Contract to the United States Cast Iron Pipe and Foundry Company was \$462,935.20. Under the terms of the contract the company must begin delivery thirty days hence, delivering one-fifth of the total of each section each month for five months.

**Utica, N. Y.**—The Board of Contract and Supply June 2 opened the bids for paving, and the lowest asphalt bids were found to be \$1.94 per square yard. Last year the first bids received were \$2.12 per square yard, and later they went up to \$2.27. The total amount of paving bid on this year was 32,500 yards, making a saving of about \$7,000 as compared with last year's prices. The total amount of the letting will be about \$95,000 and about \$40,000 of paving is still to be bid on. Mayor Wheeler is very well satisfied with the figures bid, and they are not so very much above what they were when he was Mayor sixteen years ago. Following are the bids in detail:

Asphalt, square yard, Barber Asphalt Paving Company (a), \$1.94; Warren Bros. Company (b), \$2.16; Warner-Quinlan Paving Company (c), \$2.25; asphalt, resurfacing, (a) \$1.25, (b) \$1.50, (c) \$1.25; tile drains, lineal foot, (a) 23 cents, (b) 36 cents, (c) 22 cents; new stone curb, lineal foot, (a) 75 cents, (b) 76 cents, (c) 85 cents; old curb reset, lineal foot, (a) 40 cents, (b) 50 cents; combined curb and gutter, lineal foot, (a) 55 cents, (b) 56 cents; headers, per lineal foot, (a) 40 cents, (b) 64 cents, (c) 60 cents; 12-inch branch pipe, (a) 70 cents, (b) 80 cents, (c) 75 cents; sandstone sidewalks, square foot, (a) 20 cents, (b) 19 cents, (c) 25 cents; relaying side and cross walks, square foot, (a) 5 cents, (b) 5 cents, (c) 5 cents; No. 10 catchbasins, (a) \$57, (b) \$62, (c) \$60; new manholes, (a) \$40, (b) \$55, (c) \$45; old manholes remodeled, (a) \$5, (b) \$8, (c) \$5; extra excavation, cubic yard, (a) 60 cents, (b) 50 cents, (c) 50 cents; extra concrete, (a) \$4, (b) \$6, (c) \$5.

The Barber Asphalt Paving Company, Rutgers street, 1886, Broad street 1903, Clark place 1903, Grant street 1901.

Warren Bros. Company, Warren's Acme asphalt from California, Edward street in Utica 1901 and many streets in Watertown, Toronto, Winnipeg, Boston, Toledo, Yonkers and other cities.

Warner-Quinlan Asphalt Company, Trinidad asphalt as laid in Court street and Albany street 1899.

Mayor Wheeler read this clause in the specifications: "The Board of Contract and Supply reserves the right to reject any and all bids not deemed for the best interests of the city."

Walker street, from Oneida to Kemble: D. F. Stroebel, Herkimer, paving with brick, \$2.67 per yard, \$4,347.60; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, with stone curb \$3,857.20, with cement curb, \$3,689.20; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, with stone curb \$3,430.20, with cement curb, \$3,262.20.

Jefferson avenue, Bleeker to Rutgers: D. F. Stroebel, Herkimer, brick, \$2.67 per square yard, \$19,301.40; James W. Johnston, Utica, brick, \$2.40 per square yard, \$16,969.70; Warner-Quinlan Asphalt Company, Syracuse, all sheet asphalt, \$2.25 per yard, with stone curbs and walks \$16,638.20, with cement curbs and sidewalks, \$15,788.20; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, with stone curb and sidewalks, \$16,407.60, cement curbs and walks \$15,684.20; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, with stone curb and walks, \$14,632.80, with cement curb and walks \$13,952.80.

Water street, from Bleeker to Rutgers: D. F. Stroebel, Herkimer, brick, \$2.67 per square yard, \$16,099.55; James W. Johnston, Utica, brick, \$2.45 per yard, \$14,742.50; Warner-Quinlan Asphalt Company, Trinidad asphalt, \$2.25 per square yard, stone curb and walk, \$14,082.95; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, \$14,013.20; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, \$12,328.35.

St. Vincent street, from South street to the West Shore Railroad: Warner-Quinlan Asphalt Company, Syracuse, Trinidad asphalt, \$2.25 per yard, stone curb and walk \$16,088, with cement curb, but not including walk, \$15,070.50; Warren Brothers Asphalt Company, Boston, Acme asphalt, \$2.16 per square yard, stone curb and walk, \$15,878.30, cement curb and walk, \$15,196.90; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, with stone curb and walk, \$14,135.20, cement curb and walk \$13,477.20.

Arthur street, from Seymour avenue to Taylor avenue: Warner-Quinlan Asphalt Company, Trinidad asphalt, \$2.25 per square yard, stone curb, \$7,448.15; cement curb, but not walk, \$7,005.65; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, stone curb and walk \$7,355.08, cement curb and walk \$7,041.88; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard; stone curb and walk \$6,551.30, cement curb and walk \$6,245.30.

Miller street from James street half way to Pleasant street: Warner-Quinlan Asphalt Company, Trinidad asphalt, \$2.25 per yard, stone curb and walk \$6,462.90, cement curb, but not walk, \$6,017.90; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, stone curb and walk \$6,373.08, cement curb and walk \$6,098.68; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, stone curb and walk \$5,742.10, cement curb and walk \$5,482.10.

James street, from Steuben street to Miller street: Warner-Quinlan Asphalt Company, Trinidad asphalt, \$2.25 per square yard, stone curb \$4,155.80, cement curb \$3,920.80; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, stone curb \$4,097.90, cement curb \$3,909.90; Barber Asphalt Paving Company, Trinidad Asphalt, \$1.94 per square yard, stone curb \$3,645.10, cement curb \$3,457.

West street, from James to a point midway between James and Pleasant street: Warner-Quinlan Asphalt Company, Trinidad asphalt, \$2.25 per yard; stone curb \$6,754.60, cement curb \$6,297.10; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, stone curb and walk \$6,659.94, cement curb and walk \$6,375.54; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, stone curb and walk \$6,001.80, cement curb and walk \$5,741.80.

Bleeker street, from end of present pavement to city line: Warner-Quinlan Asphalt Company, Trinidad asphalt, \$2.25 per square yard, stone curb \$9,691.50, cement curb \$9,019; Warren Brothers Company of Boston, Acme asphalt, \$2.16 per square yard, stone curb and walk \$9,869.90, cement curb and walk \$9,372.70; Barber Asphalt Paving Company, Trinidad asphalt, \$2.07 per square yard, stone curb and walk \$9,035.10, cement curb and walk \$8,545.10.

Mathews avenue, from Whitesboro to Caroline street: Warner-Quinlan Asphalt Company, Trinidad asphalt, \$2.25 per square yard, stone curb \$11,881.90, cement curb, but not walk, \$11,239.40; Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, stone curb and walk \$11,822.80, cement curb and walk \$11,310.40; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, stone curb and walk \$10,530.30, cement curb and walk \$10,032.30.

Eagle street, from Conkling avenue to St. Vincent street: Warren Brothers Company of Boston, Warren's Acme California asphalt, \$2.16 per square yard, stone curb \$2,473.74, cement curb \$2,371.74; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, stone curb \$2,161.50, cement curb \$2,059.50.

Spring street, from Huntington to Fay street: Warren Brothers Company of Boston, Acme asphalt, \$2.16 per square yard, stone curb \$2,740.44, cement curb \$2,615.44; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, stone curb \$2,430.10, cement curb \$2,305.10.

Hubbell street, from Bleeker to Elizabeth street: Warren Brothers Company of Boston, Acme asphalt, \$2.16 per square yard; stone curb and walk \$3,336.80, cement curb and walk \$3,184.80; Barber Asphalt Paving Company, Trinidad pitch lake asphalt, \$1.94 per square yard, stone curb and walk \$2,968.10, cement curb and walk \$2,816.10.

Burnet street, from Bleeker to Elizabeth street: Warren Brothers Company, Boston, Acme asphalt, \$2.16 per square yard, stone curb and walk \$3,106.30, cement curb \$2,958.30; Barber Asphalt Paving Company, Trinidad asphalt, \$1.94 per square yard, stone curb and walk \$2,685.90, cement curb \$2,537.90.

White Plains, N. Y.—The following bids were received at the office of the Board of Supervisors for construction of depressed boiler and power-house for Westchester County Court House: John B. Schaefer, Jr., Co., \$89,978; Merrill-Ruckgaber Fraser Company, \$89,476; Whitney, Stein & Co., \$94,680, and Freeman H. Merritt, \$130,413.—Lord & Hewlett, New York, N. Y., Architects; Chauncey T. Secor, Chairman.

Pembina, N. D.—The following are the proposals opened by the County Commissioners in connection with the seven steel bridges which this county proposes to build during the coming summer: Security Bridge Company, \$4,675; Nollman & Lewis, \$4,450; Hewitt Bridge Company, \$4,650; Fargo Bridge and Iron Company, \$4,325; Minneapolis Bridge and Iron Company, \$4,530. The Fargo Bridge and Iron Company's proposal was accepted, their bid being the lowest and best.—Wm. W. Felson, County Auditor.

Alliance, O.—For the paving of Patterson street and South Lincoln avenue, nine bids were submitted for each, the bidders being as follows: John Wilson, J. C. Devine and M. A. Applegate & Son, of Alliance; G. B. Smith & Bro., of Salem; Freshwater & Son, of Chester, W. Va.; Down & Campbell, of Canton; Ferry & Co., of Grafton; S. H. Debrodt, of Youngstown, and Ringwald & Son, of Chillicothe; the indications are that Downs & Campbell, of Canton, are the low bidders on the paving of both streets, their bid being \$1.16 and \$1.20 per square yard for paving; the bid of J. C. Devine was \$1.20 and \$1.49, respectively, for the same streets, and that of S. H. Debrodt \$1.20 and \$1.35; the other bids ranged from the above prices to \$1.69 per square foot.

The bidders for the building of four sewers were the same as those for paving, with the addition of Alonzo Jackson, of Alliance; the bids were referred to the City Engineer for tabulation.

Athens, O.—The bids of Frank Rose for the paving of Smith street and North Cemetery street have been accepted by Council.

Bowling Green, O.—Frank Roch has the contract for building a concrete retaining wall on the approach of the Waterville bridge at his bid of \$360.

Chillicothe, O.—The following bids were received for constructing the Honey Creek sewer: Paul & Kirschner, Dayton, \$25,806; Jardine, Brewer & Tomlinson, city, \$22,688.96; the Ironton Construction, Ironton, \$24,316.52; T. J. Backers Construction Company, Dayton, \$29,203; D. E. Sullivan & Sons, Columbus, \$33,047.80; W. H. Wringbold & Sons, city, \$24,105.62; J. C. Besley, Columbus, \$27,863; J. E. McLane & Co., Cincinnati, \$29,292; C. T. McCracken & Co., Columbus, \$29,932; Platt & Smith, Chillicothe, \$35,556; Simpson & Willis, Erie, Pa., \$26,370.94; M. L. Jones, Chillicothe, \$30,627. The items of the successful bidder, Jardine, Brewer & Tomlinson, were as follows: 26,058 lineal feet, at \$7.47; 130 lineal feet of bottom in the sewer, \$2.25; 214 lineal feet of old arch culvers, repaired, \$4.30; 200 feet of 24-inch pipe, first quality, \$1; 30 cubic yards of brick masonry, \$8.50; 20 catchbasin covers, \$10; 12 manhole covers, \$8; 200 cubic yards of excavation in pipe sewer trench, 40 cents; 1,600 cubic yards of stone delivered, 50 cents.—H. M. Redd, City Engineer.

Cincinnati, O.—The Mayor signed the ordinance giving a five-year contract to the Cincinnati Reduction Company for the removal and disposal of garbage and offal; this company bid on the five-year contract opened on May 7 as follows: First year, \$89,000; second year, \$91,000; third year, \$93,000; fourth year, \$95,000, and fifth year, \$97,000.

The Board of Public Service has awarded the contract for grading Inwood Park to A. J. Henkel at \$26,000.

Columbus, O.—The Board of Public Service has awarded the following street improvement contracts: Atcheson street, from St. Clair to Denmead street, to Harry J. Shaw, \$9,429; Crawford street, Livingston to Raymond streets, Baldwin Bros. & Graham, \$5,737; Fifth street, Sycamore to Kossuth streets, H. J. Shaw, \$7,418; Hawthorne street, Champion to Taylor streets, same, \$13,903; Ninth street, Livingston street to South Lane, Geigle & Barnes, \$3,858.

Conneaut, O.—Roy L. Williams, of Kalamazoo, Mich., was awarded the contracts for the four new pavements to be laid this summer by the Board of Public Service. Williams' bid were as follows: West Main street, \$31,287.50; East Main street, \$1,114.60; Liberty street, \$7,884; Jackson street, \$4,921. The figures are on the combinations which are most likely to be adopted by the servers, for the different streets. On West Main street, concrete curb and gutter, with concrete foundation will be used, while on East Main street a stone curb and gutter are favored. The other two improvements will likely be constructed the same as the West Main street job. Conneaut brick will be used on all the jobs. Although the servers are not yet decided on what filler will be used, there will be practically no difference in the price quoted for asphaltum, which has given such satisfaction on Harbor street. Bidding for the contracts was very close; in fact, Mr. Williams was underbid on all the jobs. E. J. Eichenlaub, of Erie, bid \$30,979.50 on West Main street, \$1,111 on East Main and \$3,564.50 on Jackson street. However, the fact that the city has had considerable trouble with pavements laid by the Eichenlaubs prejudiced the servers against considering these bids. Downs & Campbell of Canton bid \$6,201.50, and Kaumeier Bros., of Port Huron, Mich., \$7,312 on the Liberty street contract.

Downs & Campbell, of Canton have the contract for new storm sewers on Chestnut and Mill streets, and the Mitchell Hardware Company will build a combination sewer on Washington street.

Coshocton, O.—A contract was awarded to John Hall, Coshocton, O., amounting to \$240.78, June 6, for the construction of sewers. Informal bids were received from W. F. Emerson, Isleta, and F. H. Burrell. The items of Hall's bid were for 427 feet 8-inch pipe 6 feet deep in gravel soil, 27 cents, and 320 feet 8-inch pipe 7 feet deep in gravel soil, 36 cents. The wages of common labor are \$1.79 per day.—A. M. Fischer, City Engineer.

Dresden, O.—The Board of Public Service has awarded the contract for the construction of the reservoir to Frank Keesey of West Lafayette, at \$1,461; the reservoir will have a capacity of 220,000 gallons and will be bricked and clay lined.

Lorain, O.—Farriger & Randall have the contract for building a sewer on Apple street at \$1,151.

Middletown, O.—Amended contracts have been awarded to Adams Bros. and Dunzweiler Bros. for paving Putnam avenue and Brighton boulevard. A. Proe & Son of Dayton have been awarded the contract for paving Crawford street with Metropolitan block at \$16,100; the bids call for resetting old stone curb and constructing cement gutters; it is possible that combined cement curb and gutters will be constructed.

Portsmouth, O.—J. A. Kelly has the contract for the Nourse alley storm sewer; all bids on other sewers have been rejected and new bids will be invited.



**Zanesville, O.**—The Board of Public Service has let contracts on behalf of the street car company for the paving between the company's tracks on Brighton boulevard and Putnam avenue to Dunzweiler Bros., on Brighton boulevard, and Adams Bros. on Putnam avenue; it has been the custom for the street car company to make its own contracts for paving between tracks, but in these instances the company requested the Board to let the contracts, with the idea of securing uniformity in the work in each case and having it done simultaneously.

**Shawnee, Okla.**—The city has awarded the contract to A. M. Blodgett for 30,000 square yards of brick paving at \$58.000.

The Metropolitan Engineering and Construction Company secured the contract for 76,000 square yards of asphalt paving at \$147,440.—Frank P. Stearns, Mayor.

**Braddock, Pa.**—The committee consisting of the Borough Secretary and President of Council has reported on the awarding of contracts for the supplies for the different departments of the borough; the following received the contracts: Oils, Consumers' Oil Company; rubber articles, Revere Rubber Company; drills, Liberty Manufacturing Company; Monkey and Stillson wrenches, H. S. Leighton & Co.; feed, George Moore; fumigating candles, Braddock Pharmacy; potassium permanganate, George W. Kutscher; formaldehyde, John J. Walker; shovels, lanterns, mops, R. W. Edmunds; picks, handles, brooms, bluestone, zinc, chamois, J. A. Loew; castile soap and sponges, Cyrus Edmunds.

**Crafton, Pa.**—Bids for the improvement of Noble avenue were received from the following firms: Saunders Paving and Construction Company, \$9,730; James Ferry & Sons, \$8,919. On motion of Messrs. Hedrick and McClements the contract was awarded to James Ferry & Sons.

**Duquesne, Pa.**—The Chairman of the Fire and Hose Committee has been instructed to purchase two dozen rubber coats, two dozen rubber hats and two dozen pairs of rubber boots from an Ohio firm for the use of the volunteer firemen; two expanders for use of the Fire Department were also included in the order.

The bid of Charles Marmee to furnish coal to the pumping station and the garbage plant was accepted; the borough will pay \$6.90 per ton at the water station and \$7 at the garbage plant.

**Philadelphia, Pa.**—Bids were received by George S. Webster, Chief Engineer and Surveyor, Bureau of Surveys, Department of Public Works, on June 3 on schedule B for main sewers, as follows:

Extension of Charles Creek System in Eastwick avenue from present sewer south of 64th to 67th streets. Contract awarded to Robert Higgins, 4642 Lancaster avenue; 515 feet of 10-foot 6-inch dia. brick sewer in full cradle at \$24.96 per lineal foot; 505 feet of 10-foot dia. brick sewer in full cradle at \$23.89 per lineal foot; 268 feet of 9-foot 6-inch dia. brick sewer in full cradle at \$21.48 per lineal foot; average depth, 7 feet; excavation, clay and gravel.

Schuyler street from Roberts avenue to Clapier street (separate system). Contract awarded to David McMahon, E. Chelton avenue; 656 feet of 15-inch T. C. pipe with 4-foot 3-inch dia. brick sewer without cradle, \$7.85 lineal foot; 340 feet of 12-inch T. C. pipe with 4-foot dia. brick sewer in full cradle, \$7.85 lineal foot; 110 feet of 12-inch T. C. pipe with 4-foot dia. brick sewer in reduced cradle, \$7.85 lineal foot; 566 feet of 12-inch T. C. pipe with 4-foot dia. brick sewer without cradle, \$7.55 lineal foot; depth, from 1 foot to 25 feet; excavation, clay, gravel and soft rock.

Reconstruction of sewer in Clearfield street, between 12th and 16th streets. Contract awarded to Howard E. Ruch, 2851 N. Hutchinson street; 471 feet of 11-foot dia. brick sewer in reduced cradle at \$48 per lineal foot; 320 feet of 11-foot dia. brick sewer without cradle at \$43.16 per lineal foot; 150 feet of 8-foot 6-inch dia. brick sewer in reduced cradle at \$29.40 per lineal foot; 419 feet of 8-foot 6-inch dia. brick sewer without cradle at \$31 per lineal foot; 50 feet of 8-foot dia. brick sewer in reduced cradle at \$23.98 per lineal foot; 327 feet 8-foot dia. brick sewer without cradle at \$19.65 per lineal foot; one junction chamber at \$2,088 complete; one separating chamber at \$2,088 complete; 50 10x10-inch Y. P. sheathing piles in place, \$10 each; average depth, 20 feet; excavation, three-quarters clay and gravel; quarter, hard rock.

The above includes the removal of 1,754 feet of old sewer from 7 to 8 feet in diameter; also maintaining the flow of this sewer during construction of new sewer.

**Smethport, Pa.**—The Borough Council opened the following bids for paving Main street, 12,477 square yards of brick and concrete paving: Veeder Heasley, \$30,367; Reinard & Higgins, \$39,289; Louis H. Gipp Construction Company, Buffalo, N. Y., \$27,356; Smedley & Mallory, \$28,314; J. Sheehan & Co., \$34,500; Coryell Construction Company, \$29,447.—B. G. Holder, Borough Secretary.

## TRADE NOTES

**Cast-Iron Pipe.**—Chicago: No large orders were placed during the past week, but there has been an increase in the number of small orders. Quotations: 4-inch, \$27; 6 to 12-inch, \$26; 16-inch and up, \$25. St. Louis: There is a fair demand for pipe for municipal water works. Birmingham: Quotations: 4 to 6-inch, \$23; 8 to 12-inch, \$22; over 12-inch, average, \$21. New York: There is a better inquiry for carload lots and more actual placing of orders. Quotations: carload lots, 6-inch, \$24.50.

**Pig Lead.**—Market firm in New York at 4.50c. Consumers are buying sparingly, however. St. Louis market, 4.40c. In London, Spanish lead is quoted at £12 10s. and English at £13.

**Concrete Mixer.**—The Knickerbocker Co., Jackson, Mich., manufactures a concrete mixer, named the Improved Coltrin, which is particularly adapted to sidewalk requirements. Used lengthwise in the trench, the gravel delivered by teams along the bank of cut can be shoveled directly into the mixer and the concrete falling into the trench can be quickly spread, thereby saving all wheeling and requiring only one handling. After the foundation is done, the top dressing of mortar can be mixed by the machine ready to spread and trowel.

**Motor Fire Engine.**—The new self-propelling fire engine made by the International Power Company, 651 Old South Building, Boston, Mass., which was recently received by the Fire Department of Vancouver, B. C., is attracting favorable attention. It is notable that this machine was sold in competition with similar engines, built in England, which had the advantage of the preferential tariff rates.

**Concrete Sewer Molds.**—The Hickson Sewer Mold Company, Mt. Gilead, O., manufactures steel molds for building culverts, sewers, conduits and other hollow concrete structures, which have peculiar merits. The system may be briefly described as a method of erecting cut stone construction in its permanent location. There is no settling of structure where Hickson's system is employed, as the concrete is molded down in the bottom of the trench, thus preventing all danger of settling or washing out. With this system, work is constructed of a continuous length. As soon as the concrete is properly set the steel centers can be taken out. The formers can be so adjusted as to produce any desired thickness of shell, which is always uniform. Back filling can be carried on while construction work is in progress.

**Asphalt Block Plant.**—The Toledo Asphalt Block Paving Company, Toledo, O., a new concern organized to take over the paving plant of the Lake Erie Asphalt Block Company, recently opened their plant. A party of business men and city officials, guests of the company, were taken to the plant in a private car. After the factory was inspected a lunch was served and the party returned to Toledo.

**Dust Laying.**—The Indian Refining Company, First National Bank Building, Cincinnati, O., publishes a pamphlet which, besides giving an account of their numerous oil products, describes the uses of their liquid asphalt preparation especially made and tempered of solid asphalts and volatile oils for the purpose of laying dust on roads.

**Removal Notice.**—The Havemeyer Construction Co. have removed to suite 613-615, No. 145 La Salle street, Chicago, Ill.

## PATENT CLAIMS

889,929. Electrolytic Meter. George Hookham and Sydney H. Holden, Birmingham, England. Serial No. 288,296.

An electricity meter comprising in combination an electrolytic cell, including an electrolyte, a depolarizing electrode, and a gas evolving electrode; and means for measuring the gas evolved at said electrode, as set forth.

890,047. Water-Purifying Apparatus. John C. W. Greth, Pittsburg, Pa., assignor to Wm. B. Scaife & Sons Company, Pittsburg, Pa., a Corporation of New Jersey. Serial No. 351,865.

In continuous water purifying apparatus the combination with a filter and an elevated settling tank, of a draw-off pipe in the settling tank adapted to supply the filter, and means to keep the draw-off pipe always under water and to close it when the level in the settling tank falls, substantially as described.

890,055. Water Flushing Device. George H. Holmes, New York, N. Y. Serial No. 366,283.

In a water flushing device, a portable support, a nozzle carrier mounted on said support; a rotatable controlling member mounted for movement and carried by the support, a connection between said rotatable controlling member and said nozzle carrier, whereby to impart horizontal pivotal movement to said carrier, means guided by the said rotatable controlling member and having sliding movement thereon, a connection between said means and the carrier whereby to impart vertical rocking movement to said carrier, and an operating member common to said rotatable controlling member and said means guided thereby.

890,110. Street-Pavement. John M. Walsh, Beaumont, Tex. Serial No. 349,361.

A composition for pavements comprising a mixture of limestone, limestone dust and crude mineral oil of the Texas type.

890,285. Conduit-Cover. Hubert Krantz, New York, N. Y. Serial No. 398,087.

A conduit having an open face with adjacent turned over ledges and a cover for the open face, a clamping bar carried by said cover, and means operable from without the conduit for placing said bar across the ledges within the conduit and registering means on said bar adapted to permit the movement of the bar to be definitely limited therein upon the unclamping of the same.

890,301. Apparatus for Purifying Water. Hans Reiser, Cologne, Germany, assignor to Hans Reiser Company, a Corporation of Germany. Serial No. 316,429.

In an apparatus for purifying water, the combination of a vertical tank, means for maintaining a plurality of layers of baryta in said tank, means for supplying water to be purified to the bottom of said tank, and means for subdividing the stream of water supplied to the tank whereby each stream passes through its associated layer.

890,433. Sewage-Disposal Apparatus. William C. Matthias, Reading, Pa., assignor to Oliver M. Weand, Reading, Pa. Serial No. 422,153.

In a sewage filtration system having a series of stationary sprinkling nozzles, distributor conduits thereto and a main supply conduit, a dosing apparatus comprising a reservoir having a storage compartment and conduit, and a dosing compartment and conduit, said dosing compartment being in communication with said storage conduit through two separate valves and with a distributor conduit through a third valve, and float operated mechanism for automatically operating said valves to produce an intermittent varying-head flow to the sprinklers substantially as set forth.

890,453. Apparatus for Alining Conduit-Sections. Joseph T. Rice and Coleman King, West Hoboken, N. J., assignors to the firm of King, Rice and Ganey, Weehawken, N. J. Serial No. 359,019. Renewed Feb. 11, 1908. Serial No. 415,369.

An improved device for alining conduit sections comprising two approximately rectangular strips provided respectively with inclined ride-ways and recesses which coact in the movement of said strips in opposite directions to expand the latter both vertically and laterally, together with means for limiting their degree of separation.

890,573. Reinforced Cement or Concrete Catchbasin and Sewer-Pipe. John M. Phelan, Jackson, Mich., assignor to Reinforced Concrete Pipe Company, Jackson, Mich., a Corporation of Ohio. Serial No. 304,582.

The combination with a cement or concrete catchbasin, of a plurality of castings embedded in the side wall of the said catchbasin, the end portions of said castings being hollow, and the steps shaped as described and having their ends slidably mounted in the hollow portion of the castings as set forth.

## Proposals

### VITRIFIED TILE SEWER

Office of the Common Council,  
City of Butler, Indiana, June 10, 1908.

Sealed proposals will be received by said Council until Monday, June 29, 1908, at 7.30 p.m., for the construction of nearly four miles of lateral sewers in the City of Butler, Indiana, including the necessary manholes, catchbasins, and house-slants. All bids to be accompanied by a certified check of 2½ per cent. of the bid, but no check to be for a less sum than one hundred dollars. All sewers to be of vitrified tile. Specifications for this work can be obtained from Frank A. Brink, City Clerk of Butler, Indiana. The Council reserves the right to reject any or all bids, or to accept any bids as to it shall seem best.

GEORGE L. ROWE,  
(25-26) President of the Council.

### COVERED SLOW SAND FILTERS FOR BERNHART SUPPLY.

Reading, Pa.  
Sealed proposals will be received by the Board of Water Commissioners at 25 N. Eleventh street before 7:30 o'clock p.m. Friday, July 10, 1908, for constructing Bernhart Filters. Plans, specifications and proposal blanks can be had by applying in person at the office of the superintendent and Engineer, Emil L. Nuebling. Proposals must be accompanied by a certified check or proposal bond in the sum of \$15,000. The right is reserved to reject any or all proposals.

Attest: EDWARD ELBERT,  
LINCOLN S. RAMSEY, President.  
Secretary. (25-1)

### WATER WORKS AND SEWERS

Columbia, Miss.  
Bids will be received by the Mayor and Board of Aldermen until 3 p.m., June 30, 1908, for materials and construction of complete water works and sewer systems. Plans and specifications can be seen at the City Clerk's office after June 15, or can be had of the Engineer, Xavier A. Cramer, Magnolia, Miss. Specifications furnished free. Complete set of plans sent upon deposit of \$10, which said deposit will be refunded upon return of plans in good order.

### INTERCEPTING SEWER

Elizabeth, N. J.  
Sealed proposals for an intercepting sewer and lateral sewers connected therewith, in the city of Elizabeth, N. J., will be received by the City Council of said city, at a meeting to be held in City Hall, in said city, on Wednesday evening, July 1, 1908, between 8 and 8:30 o'clock.

Plans and specifications may be examined at the office of the City Surveyor.

### PAVING AND CURBING.

The city of Goldsboro is open for propositions for the construction of about 5,000 square yards of vitrified brick (or block) pavement, and about 12,000 square feet of granolithic pavement, with necessary stone curbing. Bitulithic will also be considered. Address

D. J. BROADHURST,  
City Clerk, Goldsboro, N. C.

### ELECTRIC ARC STREET LIGHTING

Wilkes-Barre, Pa.  
SEALED PROPOSALS will be received at the office of the City Clerk, Wilkes-Barre, Pennsylvania, until Thursday, July 23, 1908, at 12 o'clock noon for lighting certain of the streets of the City of Wilkes-Barre with electric arc lights for the terms of three, five and seven years beginning July 1, 1908, in accordance with specifications and bidding blanks on file in said office, copies of which may be had upon application to the City Clerk. Proposals to be endorsed "Proposals for Electric Street Lighting," and addressed to Fred H. Gates, City Clerk, Wilkes-Barre, Pennsylvania. Each proposal must be accompanied by a certified check of the bidder for the sum of five thousand dollars (\$5,000) payable to the order of the City of Wilkes-Barre. Proposals will not be accepted later than 12 o'clock noon, July 23, 1908. The Joint Street Lighting Committee reserves the right to accept or reject any or all bids.

R. H. RICHARDS, Chairman.  
(25-2t)

### SALE OF ELECTRIC LIGHT PLANT

Valley City, N. D.  
Sealed bids will be received by the City Council of the City of Valley City, North Dakota, up to 8 o'clock p.m., Monday, July 6, 1908, for the sale of the city's electric light plant. Said bids must be addressed to the City Auditor of said city and must be endorsed on the outside thereof, "Bids for Electric Light Plant."

No bid will be considered which is for a less sum than \$40,000, and all bids must be accompanied by a certified check for 5 per cent. of the amount of bid, and made payable to the City Treasurer of said city.

An exclusive 20-year franchise will be granted the successful bidder, the terms and conditions of which will be agreed upon on the acceptance of any bid.

An inventory and any information can be obtained from the City Auditor of said city upon application.

The right is reserved to reject any and all bids.

By order of the City Council.  
H. F. HALVERSON,  
City Auditor of Valley City, N. D.  
Dated May 12, 1908. (23-26)

### AQUEDUCT

Board of Public Works.

Los Angeles, Cal., May 15, 1908.

Sealed proposals will be received at the office of the Board of Public Works, July Seventeen, 1908, for the construction of the Jawbone Division of the Los Angeles Aqueduct, with a capacity of four hundred second feet, including about forty-three thousand lineal feet of lined tunnel, sixty thousand lineal feet of lined conduit, and three hundred forty thousand cubic yards of excavation. The work is subdivided into three sections, and separate or lump sum proposals will be received. Plans and specifications may be obtained from the Board.

HORACE B. FERRIS,  
Secretary.

### BRIDGES

Jackson, Ohio.

Bids are asked until 1 o'clock a.m., on June 17, 1908, by Ed. Monahan, County Surveyor, Jackson County, O., for seven reinforced concrete bridges, containing 370 cubic yards, and 72 foot span steel bridge; also stone abutments for steel bridge, containing 130 cubic yards.

ED. MONAHAN,  
County Surveyor.

### SALE OF BOILERS, ENGINES, PUMPS, ETC.

#### LEGAL NOTICE

Sealed bids will be received by the Board of Public Service of the City of Cincinnati, State of Ohio, at the office of said Board, until 12 o'clock noon of Monday, July 13, 1908, for the sale of boilers, pumping engines, deep well pumps, boiler feed pumps, hoisting engines, horizontal engines, tools, etc., at

Linwood Pumping Station,  
Cumminsville Pumping Station,  
Westwood Pumping Station,  
Front Street Pumping Station,  
Mt. Hope Pumping Station,  
Hunt Street Pumping Station.  
List and descriptions can be procured in said office.

Each bid must contain the full name of every person or company interested in the same and be accompanied by a bond in the sum of twenty-five per cent. of the amount of bid, to the satisfaction of the Board, or a certified check on some solvent bank, as a guaranty that if the bid is accepted a contract will be entered into and its performance properly secured. Should any bid be rejected, such check will be forthwith returned to the bidder; and should any bid be accepted, such check will be returned upon the proper execution and securing of the contract.

Bidders are required to use the printed forms. The right is reserved to reject any and all bids.

By order of the Board of Public Service.  
JOHN J. WENNER, Clerk.  
June 13, 1908. (25-2)

### REINFORCED CONCRETE BRIDGE

Norfolk, Va., June 10, 1908.

Sealed proposals will be received at the office of the Board of Control until 12 o'clock m., on the 30th day of June, 1908, for the construction of one reinforced concrete bridge, about 100 feet long and about 52 feet wide.

Plans and specifications may be inspected at the office of the City Engineer, Norfolk, Va., or may be had on application by depositing the sum of five dollars (\$5.00), three dollars (\$3.00) of which will be refunded upon return of the plans and specification. Bidding blanks may be obtained from the same office on request.

Each bid must be accompanied by a certified check on some local bank in the sum of five hundred dollars (\$500).

The Board of Control reserves the right to reject or accept any or all bids, as may be deemed best for the interests of the City of Norfolk, Va.

W. T. BROOKE,  
City Engineer for Board of Control.  
(25-26)

### PROPOSALS FOR PLANS AND SPECIFICATIONS FOR SEWER.

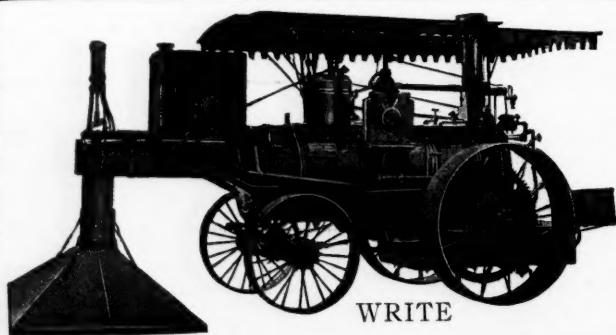
Shelbyville, Ind., June 5, 1908.

Sealed proposals will be received at the office of the City Engineer up to 6 o'clock p.m. Tuesday, July 7, 1908, for the preparation of plans and specifications, including estimate of all costs, for complete sanitary and storm water system, and sewage disposal plant. Such plans will necessitate the taking of all measurements and all levels of all streets by the Engineer making such plans. Address

J. H. PHILLIPS,  
Shelbyville, Ind.

### WANTS

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